USER AND INSTALLATION MANUAL
FOR SHUTTLE, FMS AND BCS

FOREST
DRAPERY HARDWARE

THE WORLD BEHIND YOUR CURTAINS

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v1.8

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IMPORTANT INSTRUCTIONS FOREST MOTORISATION

Read these instructions carefully before using the Forest Shuttle, FMS and BCS motors and save them for future reference.

⚠ This Shuttle, FMS and BCS motors is for indoor use ONLY and may not be installed in humid environments such as bathrooms, showers, etc.

⚠ The Shuttle motor may ONLY be used in combination with the supplied transformer. Do not apply reverse power (wrong polarity) to the Shuttle curtain motor.

⚠ In case a motor is overheating or smoke comes from the motor, disconnect power immediately.

⚠ If the Shuttle curtain motor is connected to the transformer and cannot be operated, disconnect power immediately and contact your supplier.

⚠ Any changes or modifications to the Shuttle, FMS or BCS motor that are not approved by the manufacturer will void the user's authority to operate the equipment. Forest Group does not assume liability for resulting damages to property or personal injury if the product has been abused in any way or damaged by improper use or failure to observe these operating instructions. The warranty/guarantee will then expire!

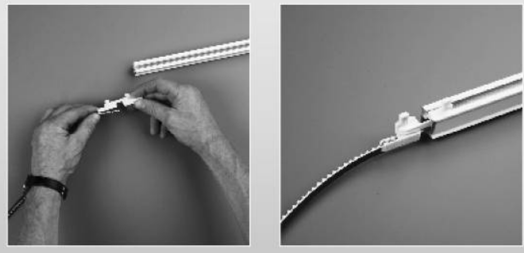
INSTRUCTION FOR ASSEMBLING FMS/SHUTTLE

Necessary items:	*Articlenumber:*
FMS Track 580cm	5101001580
FMS Track 700cm	5101001700
FMS Transport Belt	5105501000
FMS / CCS Master Carrier Underlap R/L	5215801000
FMS / CCS Master Carrier Overlap R/L	5215901000
FMS / CCS Master Carrier Single Arm R/L	5216001000
FMS Motor Pulley	5103011000
FMS Return Pulley	5103011100
FMS Connector	5103011500
FMS Metal Clip for motor pulley	5103011001
FMS Carrier	2510101000

⚠ We advise to make the curtail 10cm wider, to be able to cover the motor and retour pulley completely.

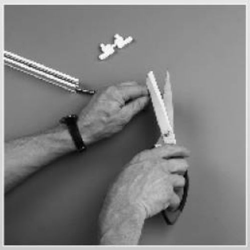
STEP BY STEP ASSEMBLY
OF THE FMS AND SHUTTLE TRACK

STEP 1



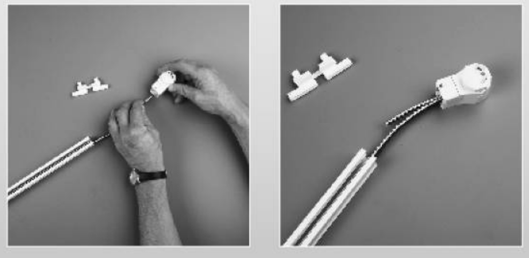
Cut the track 10.5cm shorter than the total lenght required.
Slide the belt through the track by using the FMS belt connector.

STEP 2



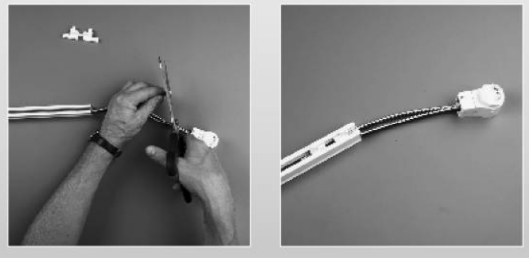
Cut the belt under an angle to remove the 1st tooth. This ensures a smooth sliding through the FMS Return Pulley.

STEP 3



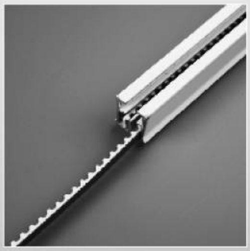
Take off the cord connector and push the belt through the FMS Return Pulley until the above figure is achieved

STEP 4



Cut off the remaining part of the 1st tooth, then attach the belt connector and put the belt back into the other trackchannel until above figure is achieved.

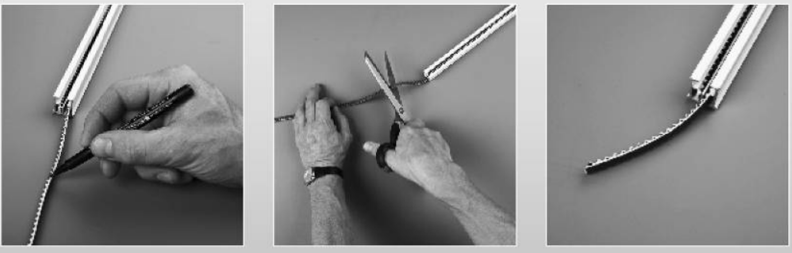
STEP 5



Now pull the belt through the track and take off the belt connector at the end.

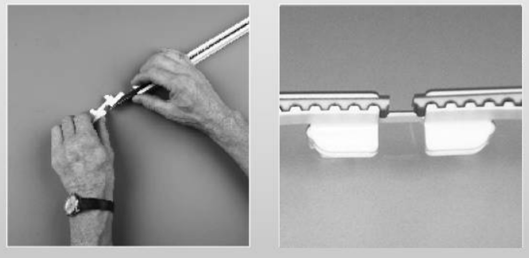
STEP BY STEP ASSEMBLY
OF THE FMS AND SHUTTLE TRACK

STEP 6



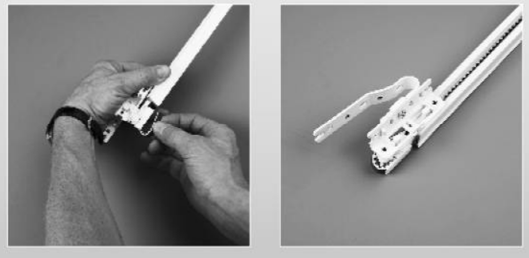
Keep one side of the belt flush with the end of the rail.
Now start counting 17 teeth of the belt, mark the 17th tooth of the belt and cut it here after.

STEP 7



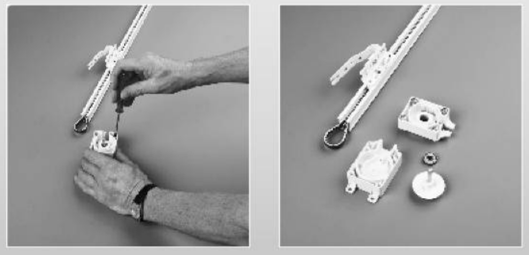
Now connect one end of the belt to the belt connector and insert the first piece of the master carrier into the track. Make sure the first tooth stays outside the connector, in the middle.

STEP 8



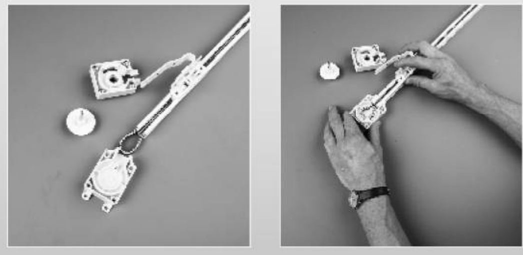
Connect the other end of the belt to the connector to make a loop and slide the master carrier fully into the track. Again make sure that the first tooth stays outside of the connector, in the middle.

STEP 9



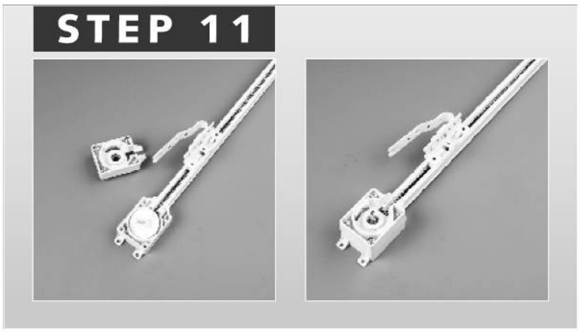
Now take the FMS motor pulley apart by removing the screws.

STEP 10

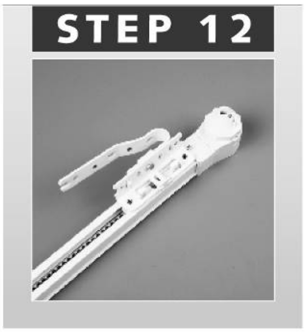


Position the bottom piece of the motor pulley onto the track, make sure the belt falls into place.

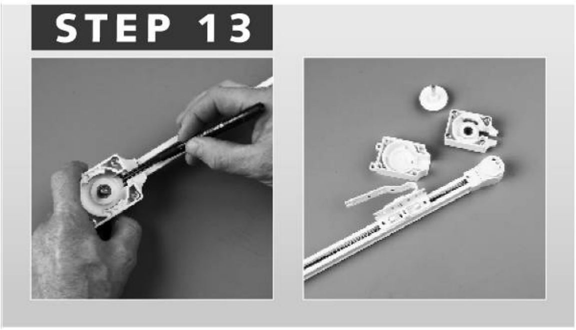
STEP BY STEP ASSEMBLY
OF THE FMS AND SHUTTLE TRACK



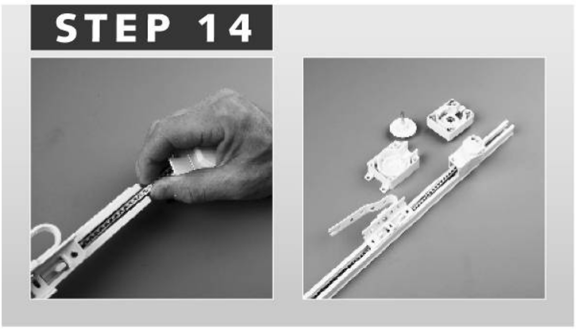
Now position the center piece onto the motor pulley, making sure the ball bearing falls into place, and place the top piece on the motor pulley again.



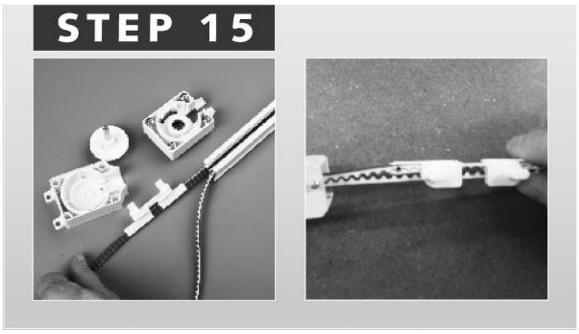
Slide the master carrier to the end of the track, against the end pulley.



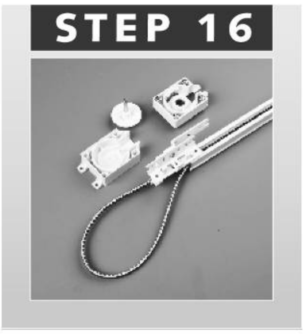
On the side of the motor pulley; mark the first visible tooth on the opposite part of the belt where the first master carrier is attached. Remove the motor pulley again from the track.



Take off the return pulley and lift it together with the belt up onto the track, like the pictures show.



On the side of the motor pulley, slide out the belt, until the marked tooth becomes visible. Now put the belt connector over this tooth. it is very important that the marked tooth is clamped by the connector as shown in the picture.

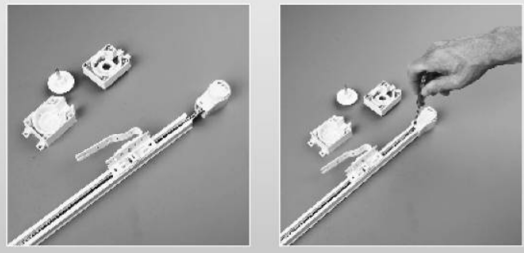


Now position the second master carrier over the belt connector and slide them together into the track.

STEP BY STEP ASSEMBLY

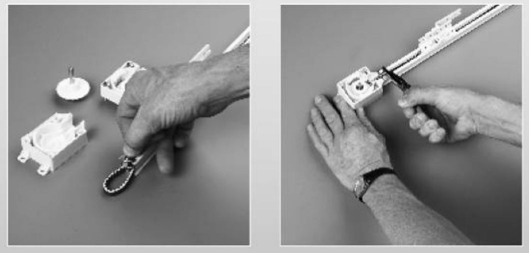
OF THE FMS AND SHUTTLE TRACK

STEP 17



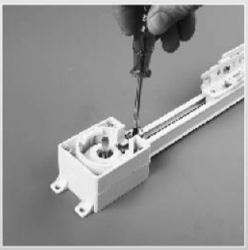
Now reposition the end pulley onto the track an fasten the screw.

STEP 18



Place the metal FMS clip inside the track, put the motor pulley on the track again and place the metal clip over the motor pulley, to ensure a good fixation.

STEP 19

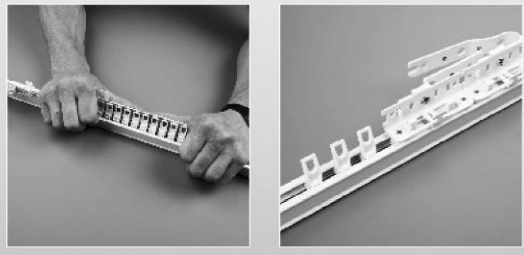


Now tighten all the screws of the motor pulley again.

STEP 20

In order to ensure a smooth running of all the components inside the track, it is necessary to lubricate the track, the pulleys and the master carriers with the special Forest lubrication spray.

STEP 21



Finally, position the FMS carriers onto the track and click them into the track, by using your thumbs. Remove the plastic strip.

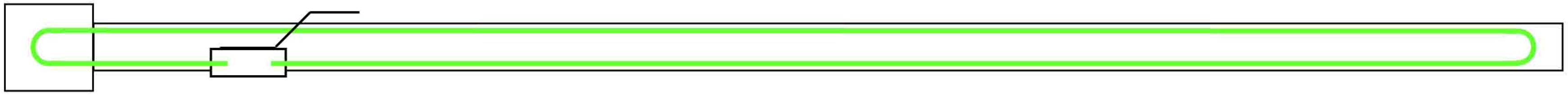
STEP 22

The basic assembly of the track is now complete, the system is ready to be installed with the motor.

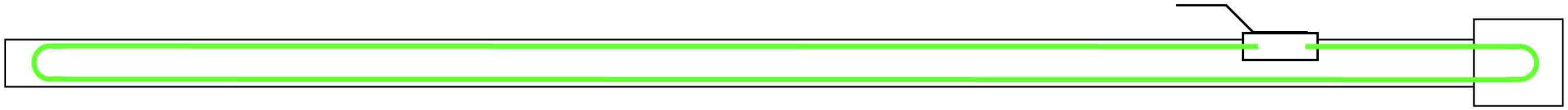
Method of assembling the toothed belt to avoid changing the motor direction of the Shuttle.

The view is like when you assemble, you look into the track. Backside of the track on the table, topview.

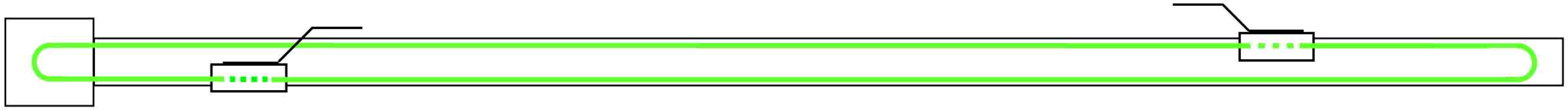
Motor left
single curtain



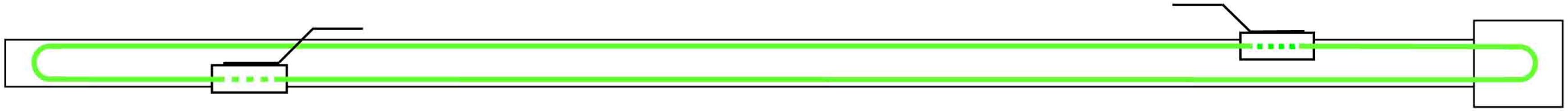
Motor right
single curtain



Motor left
double curtain



Motor right
double curtain



TECHNICAL INFORMATION SHUTTLE MOTOR

SPECIFICATIONS SHUTTLE MOTOR:

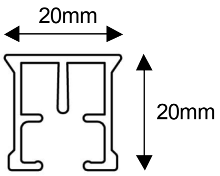
Maximum torque:	1,5Nm
Maximum speed:	100rpm ≈ 15cm/sec
Current draw at max. torque:	2,7A at 24 Vdc
Operating temperature:	0-50°C / 32-122°F
Weight per carrier:	1,0kg – max. 10kg/mtr
CE / FCC approved	

SPECIFICATIONS ADAPTOR:

Input:	100-240Vac – max.1,5A - 50-60Hz
Output:	24Vdc - 2,7A
CE / FCC / UL / TÜV	
Efficiency level V	

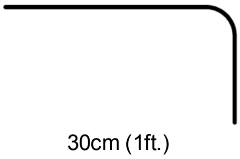
SPECIFICATIONS TRACK:

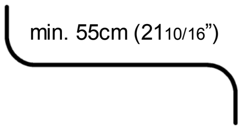
Weight:	303 gr/mtr (3.25 ounce/ft)
Size:	20x20mm (0.79x0.79 inch)
Material:	Aluminium extrusion 6063 T5
Finish:	Powder coated, lubricated
Available lenghts:	5.80mtr and 7.00mtr

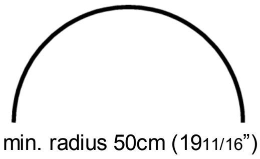


BENDING/CURVING:

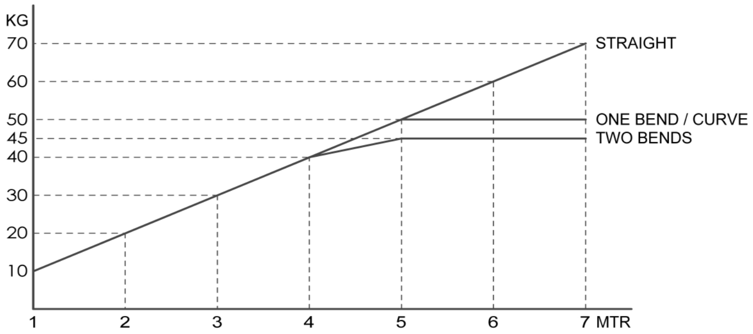
The Shuttle motor can be used in a track with one or two bends of 90 degrees. The track can be curved and reversed curved in any horizontal direction with a radius of 20cm (8 inch). Bends with a larger radius and continuous curves can be made with the electrically powered bending tool.







LOAD TABLE (with carriers):



Installing the **FOREST SHUTTLE**

1

Assemble the track

2

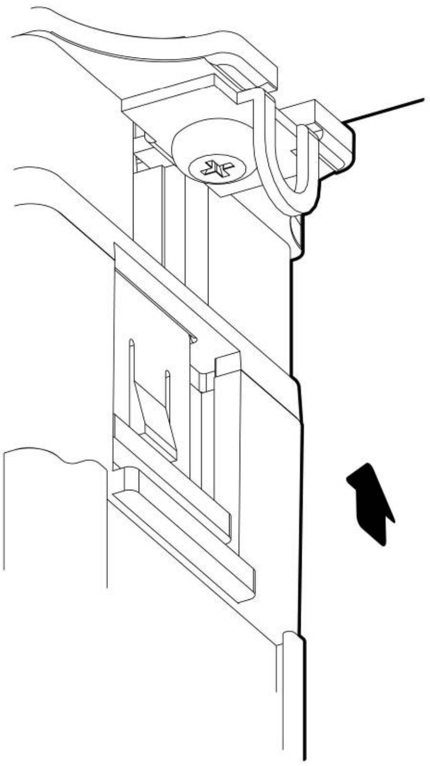
Install the brackets and insert the track to the brackets

3

Do not attach the drapery yet, Attach the drapery after the end positions have been set.
- slide the master carrier(s) into a half open position

4

Attach the motor to the track

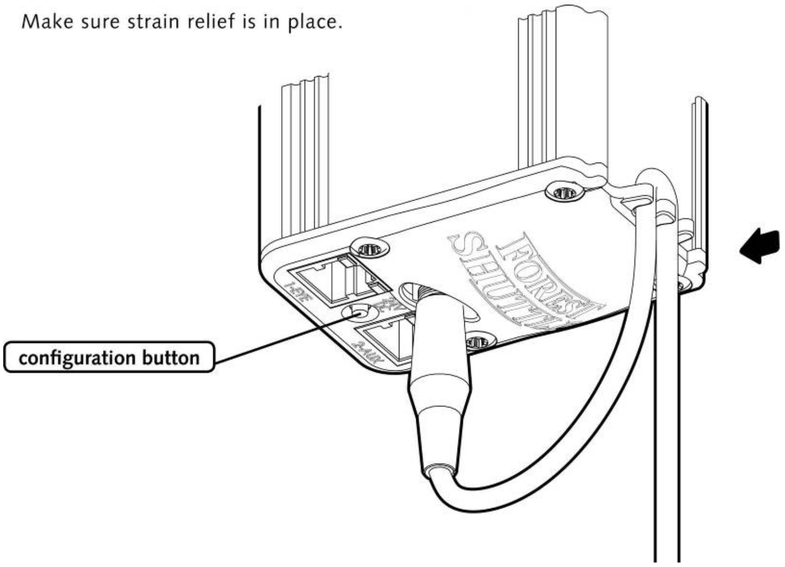


make sure to secure the locking pin of the Forest Shuttle

5

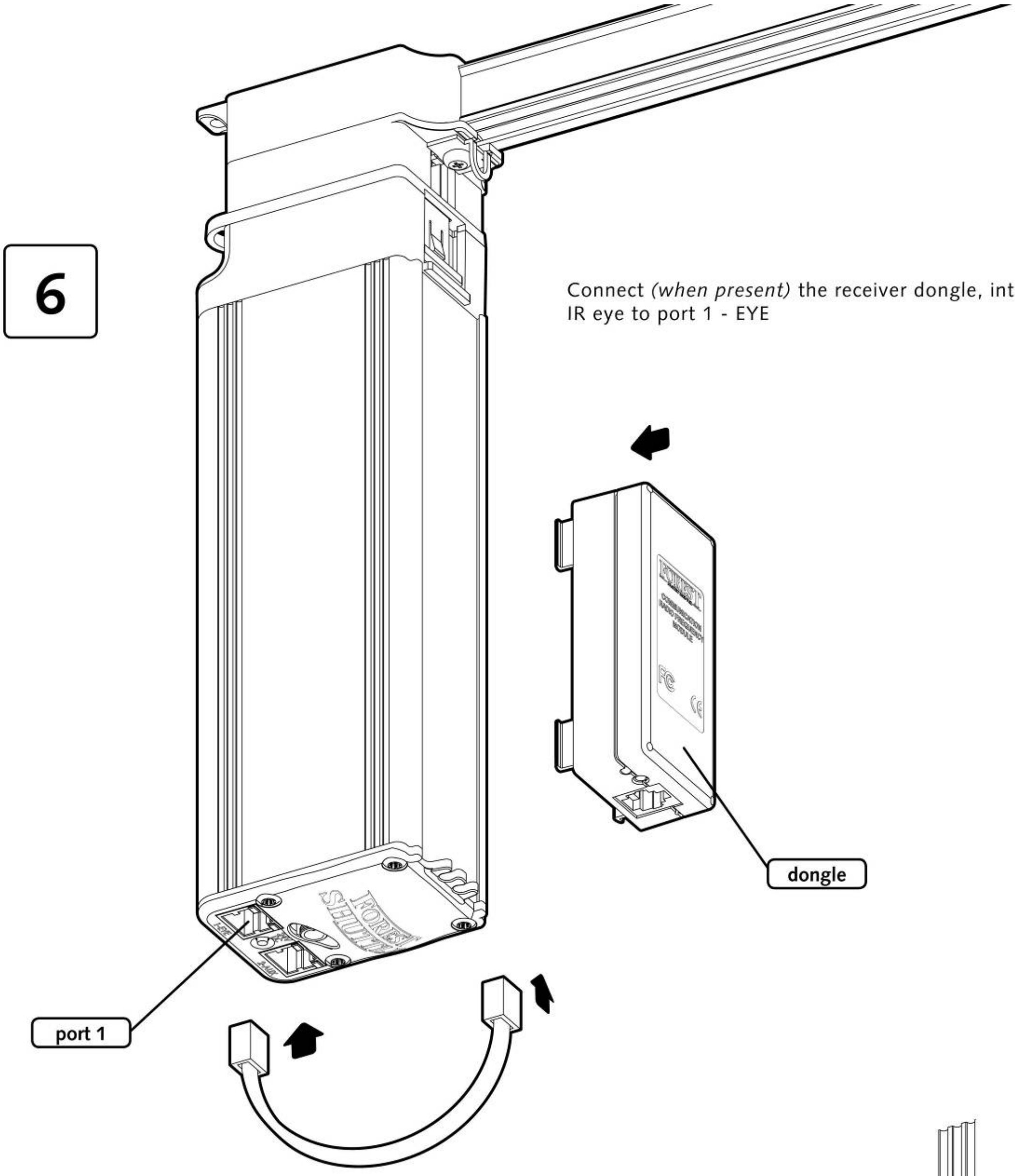
Connect the AC plug from the 24V power adaptor to the wall socket and the power plug into the motor socket.

Make sure strain relief is in place.

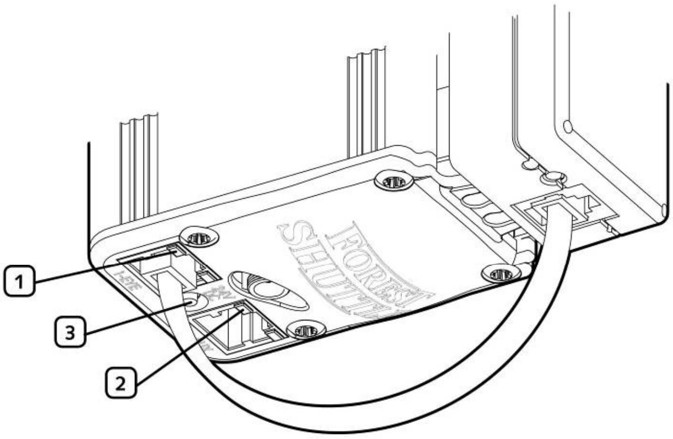


loop the power cord through the strain relief

6



Connect *(when present)* the receiver dongle, interface or IR eye to port 1 - EYE



7

CONFIGURE THE FOREST SHUTTLE:

Explanation:

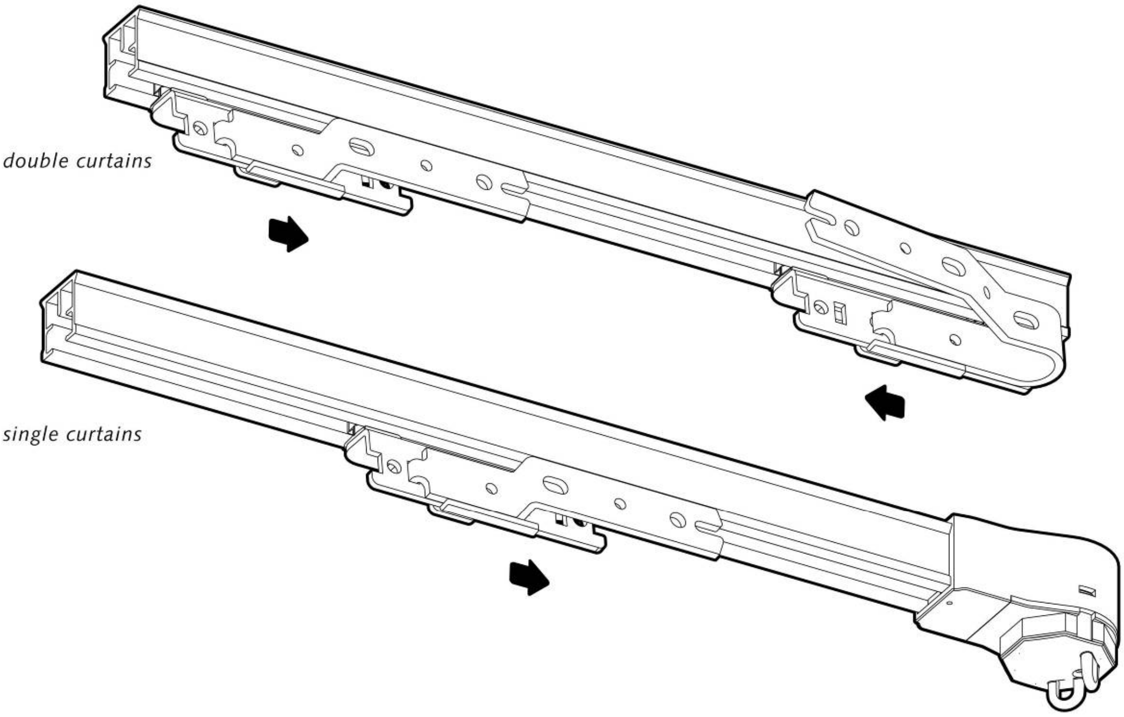
1. ADMIN LEDS: these are the LEDs on the left port at the bottom of the motor. Left is the green admin LED and right is the yellow admin LED. This port is marked "1 - EYE"

2. USER LEDS: these are the LEDs on the right port at the bottom of the motor. Left is the green user LED and right is the yellow user LED. This port is marked "2 - AUX"

3. CONFIGURATION BUTTON: this is the button at the bottom of the motor between the two ports. The button does not function when the motor is operating.

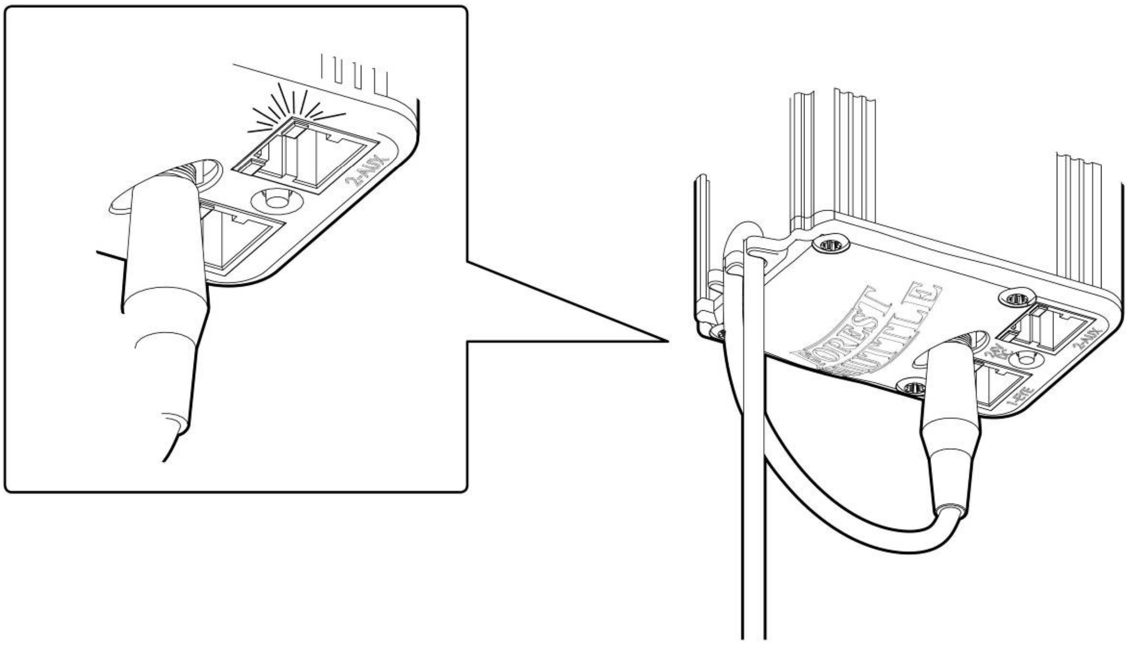
8a

Determining the motor direction:
Pull the master carrier to the closed position, the motor will start running towards the closed position.
Pay attention to the YELLOW USER LED *(at right connector)*


double curtains
single curtains

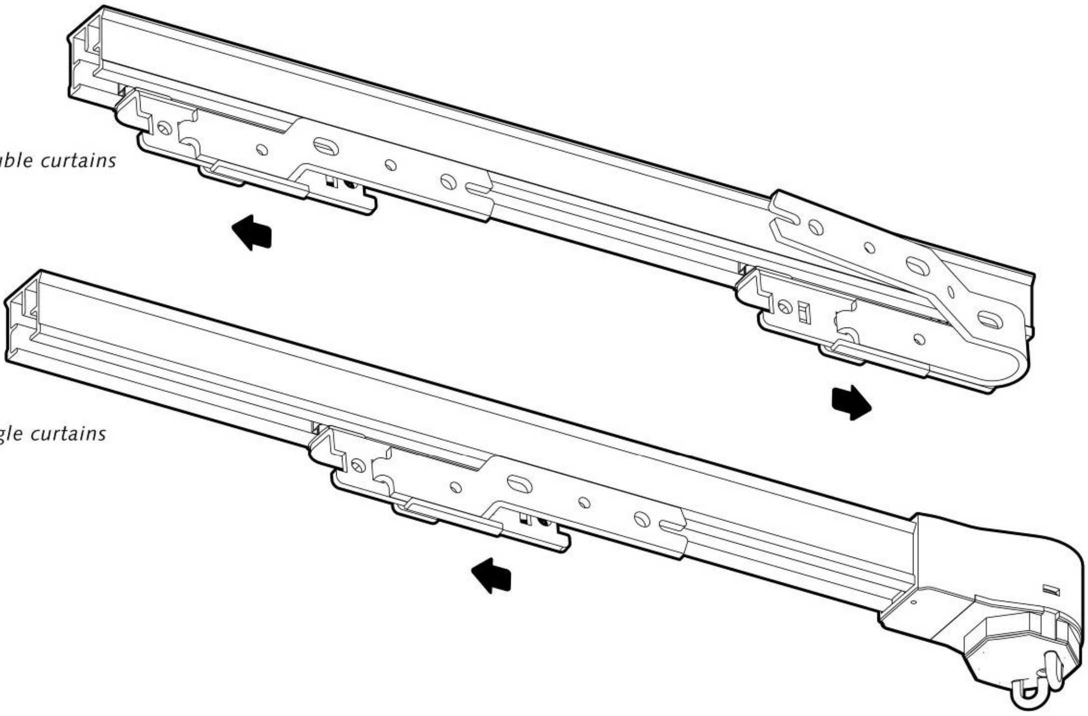
8b

Now the two possibilities are:
a) YELLOW LED OFF, motor direction is correct, proceed to step 9
b) YELLOW LED ON, this indicates that the motor direction is wrong and the drapery stack back will be in the wrong position. Toggle the motor direction as shown in the options table on page 15.


2-AUX
FOREST SHUTTLE
24V
Left
2-AUX

9

SETTING THE OPEN LIMITS:
Pull the master carrier in the open direction. This will start the motor and open the carriers. Once the drape has reached the OPEN position you have 7 seconds (while the YELLOW LED is on) to manually adjust the master carrier(s), setting the OPEN limit. After 7 seconds the YELLOW LED goes off and the limits are set.

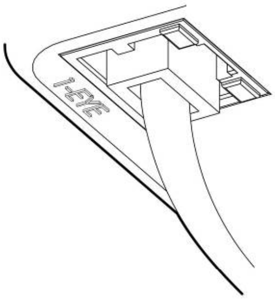


double curtains

single curtains

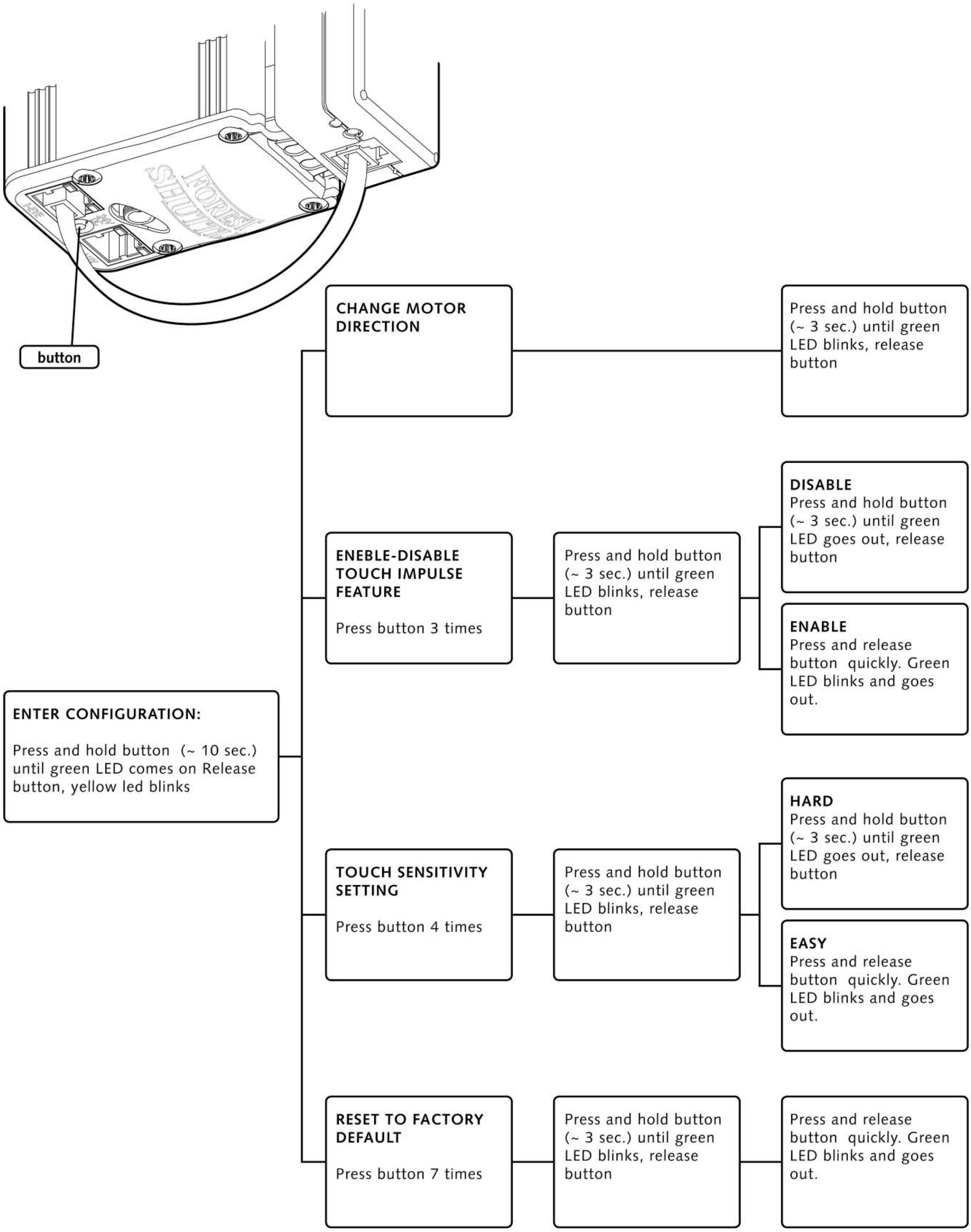
10

In case of a receiver dongle *(RF or IR)*, always connect to port 1 - EYE.



note

if you were not successful in setting the limits - re-set to factory default as shown in the options table on next page.



ENTER CONFIGURATION:

Press and hold button (~ 10 sec.) until green LED comes on Release button, yellow led blinks

CHANGE MOTOR DIRECTION

Press and hold button (~ 3 sec.) until green LED blinks, release button

ENEBLE-DISABLE TOUCH IMPULSE FEATURE

Press button 3 times

Press and hold button (~ 3 sec.) until green LED blinks, release button

DISABLE
Press and hold button (~ 3 sec.) until green LED goes out, release button

ENABLE
Press and release button quickly. Green LED blinks and goes out.

TOUCH SENSITIVITY SETTING

Press button 4 times

Press and hold button (~ 3 sec.) until green LED blinks, release button

HARD
Press and hold button (~ 3 sec.) until green LED goes out, release button

EASY
Press and release button quickly. Green LED blinks and goes out.

RESET TO FACTORY DEFAULT

Press button 7 times

Press and hold button (~ 3 sec.) until green LED blinks, release button

Press and release button quickly. Green LED blinks and goes out.

note

The speed at which the button is pressed is important. Use slow, deliberate pushes.

Factory defaults:
1) No end limits are set
2) Origional motor direction
3) Touch control sensitivity - easy
4) No intermediate positions are set

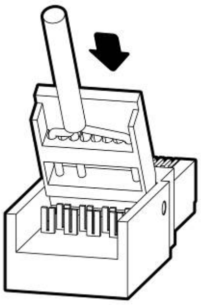
extra

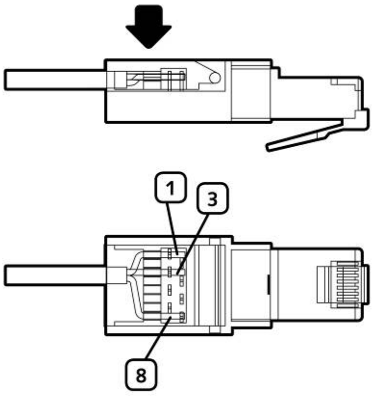
CONNECTING WALLSWITCH

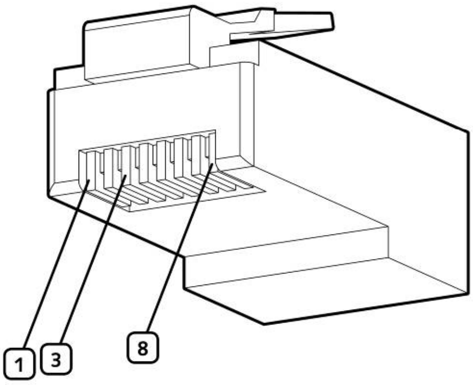
Either of the 2 ports can be used to connect a (pulse) switch to open, close or stop the drapery. Pins 1, 3 and 8 are used for this. If pins 3 and 1 are connected by means of the switch then the drapery will open/close (according as the motor direction is toggled or not). If pins 3 and 8 are connected then the drapery will move in the opposite direction.

This connection can also be used for home automation systems. Be sure the outputs (relay) are dead (no potential)

do-it-yourself plug







TANDEM AND SKYLIGHT MOTOR SETUP (master-slave setup)

1) Master and slave motor MUST have motor direction set correctly.
2) Master motor must be connected with a 6 or 8 conductor cable from port 2 on master to port 2 on slave.
3) The master and slave motors MUST be in the same position.
4) Put slave motor into slave mode as per the sequence below. Green user LED comes on.
5) Put master motor into master mode as per the sequence below. If all goes correctly, green LEDS on both master and slave motor will go out.
6) If this sequence does not happen, you may try doing the master sequence again as long as the green slave LED is still lit. Otherwise reset everything and try again.
7) Once the master and slave are working together, set the limits (only master motor).

DESCRIPTION	STEP - 1 Enter Admin Mode	STEP – 2 Select Option	STEP – 3 Confirm Option	STEP – 4 Selection
Slave	PRESS and HOLD button (~ 9 sec) until GREEN LED comes on - RELEASE button. Yellow LED blinks once.	PRESS Config button six times.	PRESS and HOLD button (~ 3 sec.) until GREEN LED blinks - RELEASE button.	PRESS and RELEASE button QUICKLY. GREEN LED blinks and goes out, then GREEN USER LED comes on.
Master	PRESS and HOLD button (~ 9 sec) until GREEN LED comes on - RELEASE button. Yellow LED blinks once.	PRESS Config button five times.	PRESS and HOLD button (~ 3 sec.) until GREEN LED blinks - RELEASE button.	PRESS and RELEASE button QUICKLY. GREEN LED blinks and goes out.

note

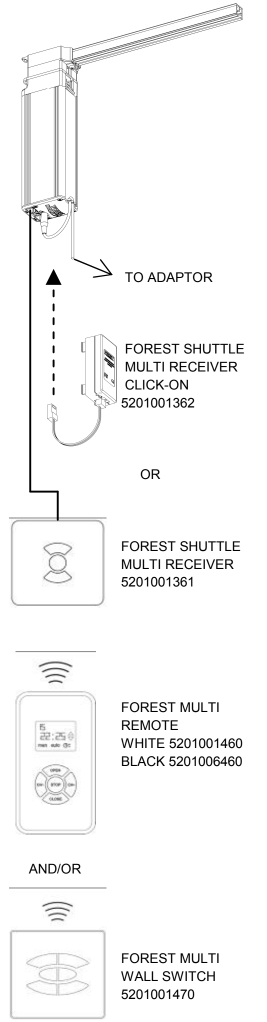
The master motor will not run if the connection between the motors is broken.
Either motor stalling will stop both motors.
In case of a Skylight System both tracks must be connected physically by a rod. Touch impulse must be disabled and freewheel clutch disabled.
In case of 2 curtain tracks with each one motor, length of the tracks must be equal. Touch impulse only works on master.

FOREST
DRAPERY HARDWARE

WAYS TO OPERATE THE FOREST SHUTTLE

RF WIRELESS

MULTI


TO ADAPTOR

FOREST SHUTTLE
MULTI RECEIVER
CLICK-ON
5201001362

OR

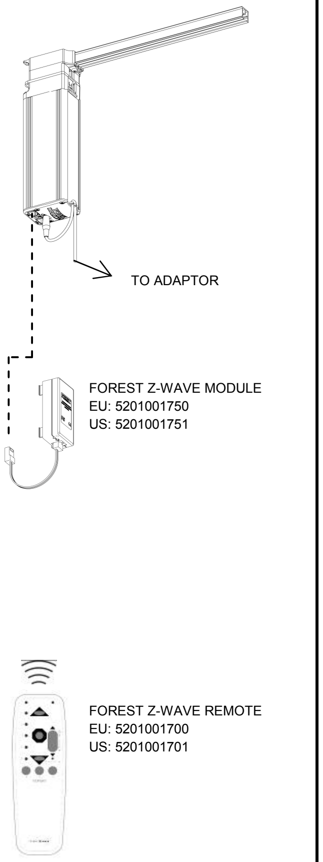
FOREST SHUTTLE
MULTI RECEIVER
5201001361

FOREST MULTI
REMOTE
WHITE 5201001460
BLACK 5201006460

AND/OR

FOREST MULTI
WALL SWITCH
5201001470

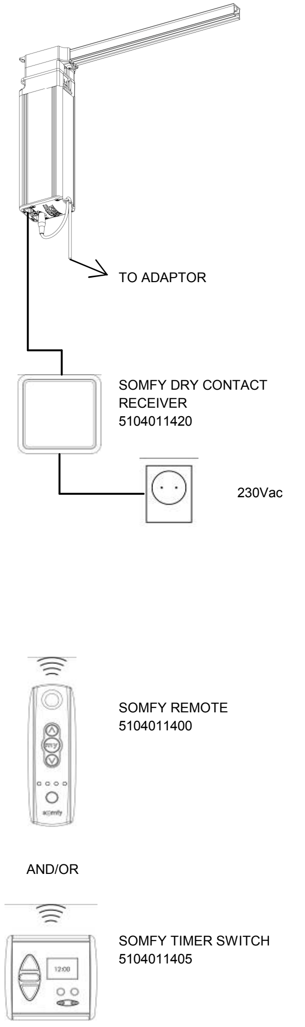
Z-WAVE


TO ADAPTOR

FOREST Z-WAVE MODULE
EU: 5201001750
US: 5201001751

FOREST Z-WAVE REMOTE
EU: 5201001700
US: 5201001701

SOMFY


TO ADAPTOR

SOMFY DRY CONTACT
RECEIVER
5104011420

230Vac

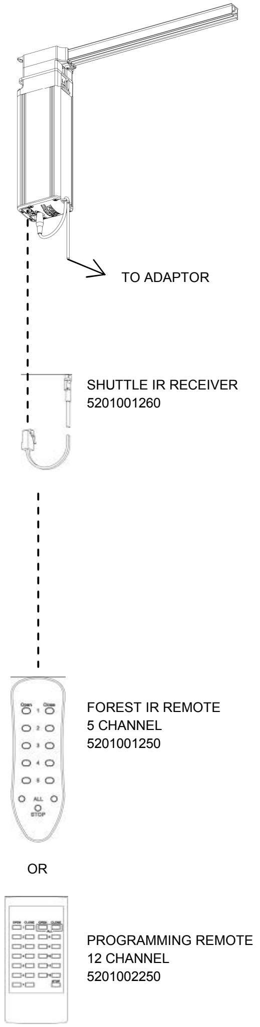
SOMFY REMOTE
5104011400

AND/OR

SOMFY TIMER SWITCH
5104011405

IR WIRELESS

INFRA RED


TO ADAPTOR

SHUTTLE IR RECEIVER
5201001260

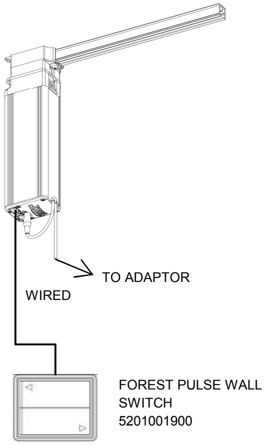
FOREST IR REMOTE
5 CHANNEL
5201001250

OR

PROGRAMMING REMOTE
12 CHANNEL
5201002250

WIRED

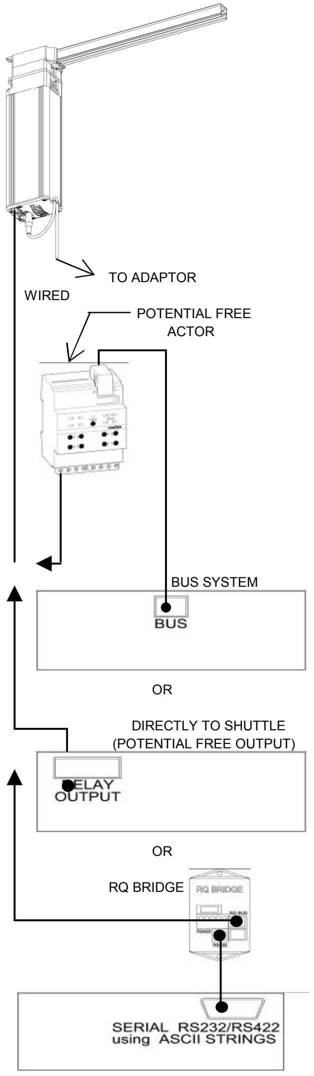
MECHANICAL SWITCH


TO ADAPTOR

WIRED

FOREST PULSE WALL
SWITCH
5201001900

HOME AUTOMATION


TO ADAPTOR

WIRED

POTENTIAL FREE
ACTOR

BUS SYSTEM

BUS

OR

DIRECTLY TO SHUTTLE
(POTENTIAL FREE OUTPUT)

RELAY
OUTPUT

OR

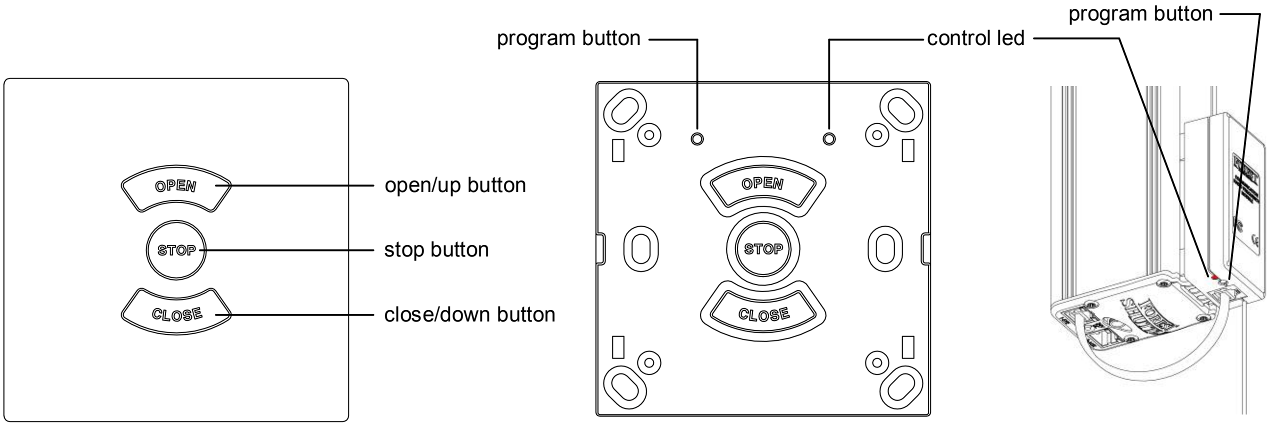
RQ BRIDGE

SERIAL RS232/RS422
using ASCII STRINGS

FOREST MULTI RECEIVER / WALL SWITCH – 5201001360 / 1 / 2

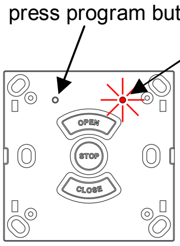
TECHNICAL SPECIFICATION:

- powered by Shuttle
- can also be used as wall switch
- cable 0,5mtr → 5201001360
- cable 3,5mtr → 5201001361
- click-on → 5201001362
- connect to port 1 of the Forest Shuttle
- can control several Shuttles parallel
- working temperature -10°C - +50°C
- works on Forest Multi Remote and Forest Multi Wall Switch RF

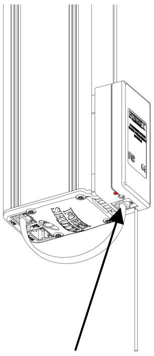


PROGRAMMING REMOTE / WALL SWITCH TO RECEIVER:

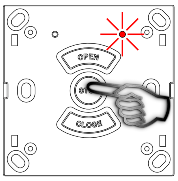
press program button, led will blink



or

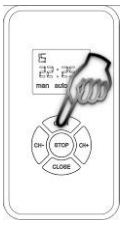


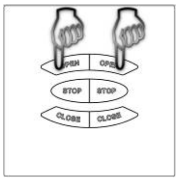
press stop button



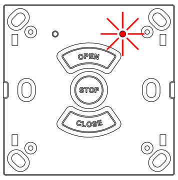
press program button, led will light up

hold the remote/wallswitch within 0,5 mtr from receiver. Select channel (1-15) and press open button:



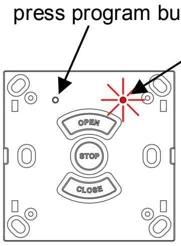


led must blink 3 times and will go off

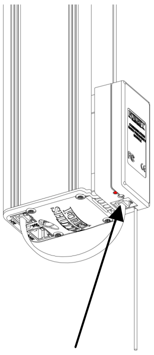


CANCEL ONE CHANNEL OF REMOTE / WALL SWITCH

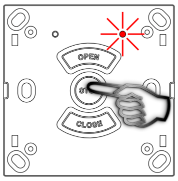
press program button, led will blink



or

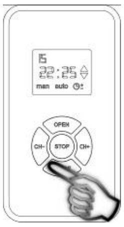


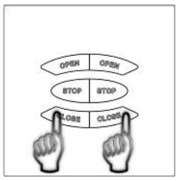
press stop button



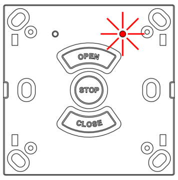
press program button, led will light up

select channel and press close button:



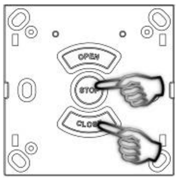


led will blink and will go off

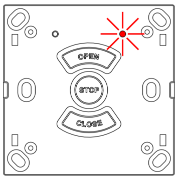


DELETE ALL PREVIOUS PROGRAMMED REMOTES / WALL SWITCHES:

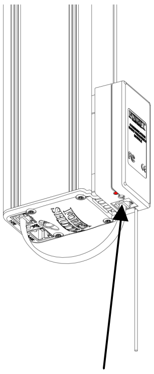
press stop and close button of receiver for ~6 sec.



led will blink and will go off



or

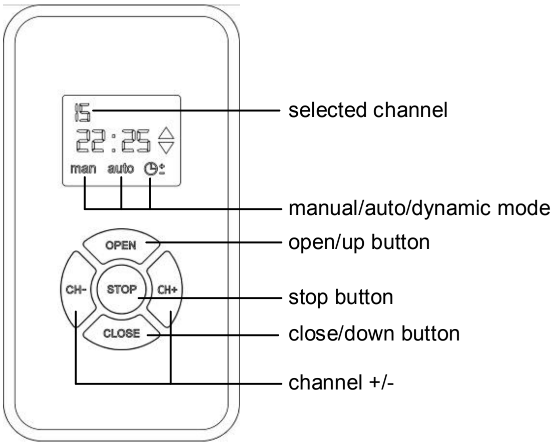


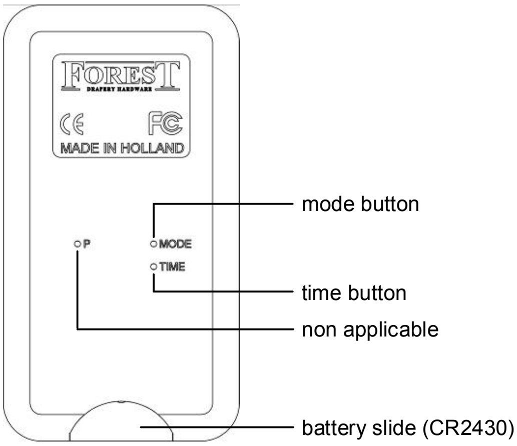
press and hold the program button for 10 seconds until led starts blinking

FOREST MULTI REMOTE - 5201001460

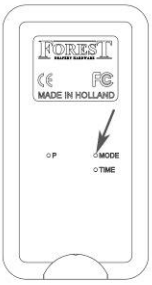
TECHNICAL SPECIFICATION:

- 3V battery CR2430
- battery life > 3 years
- frequency 433.92MHz
- transmit power 10mW
- transmit range indoors max. 30mtr
- working temperature -10°C - +50°C
- modes: manual, timer and dynamic timer (15 minutes + and -)
- each channel can control up to 20 receivers / motors

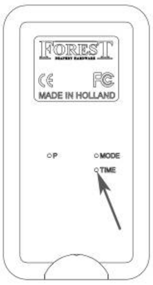

15
22:25
man auto
OPEN
CH-
STOP
CH+
CLOSE
selected channel
manual/auto/dynamic mode
open/up button
stop button
close/down button
channel +/-


FOREST
DRAPERY HARDWARE
CE FC
MADE IN HOLLAND
P
MODE
TIME
mode button
time button
non applicable
battery slide (CR2430)

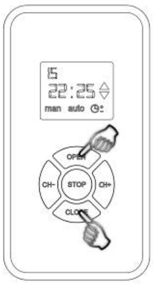
SET TIME:



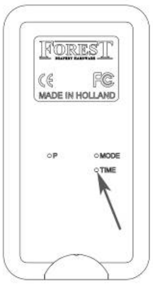
PRESS MODE TO SET MODE TO MANUAL ‘man’ ON DISPLAY



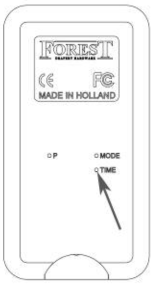
PRESS TIME FOR ~7SEC. → 2 DIGITS WILL BLINK



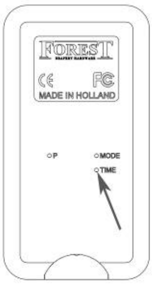
PRESS BUTTONS TO CHANGE TIME



PRESS TIME TO TOGGLE BETWEEN HOURS/MINUTES



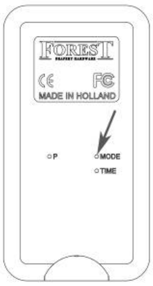
PRESS TIME ~7SEC. UNTIL ALL DIGITS STOP BLINKING



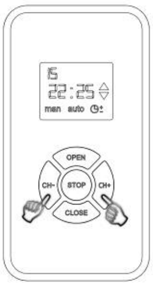
PRESS TIME ONCE MORE TO FINISH AND START CLOCK

BEFORE SETTING THE TIMER, SET THE CLOCK!

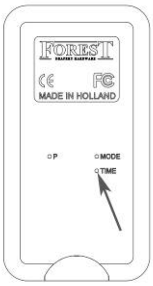
SET TIMER (EACH CHANNEL SEPARATE):



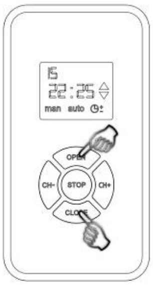
PRESS MODE TO SET MODE TO AUTO OR DYNAMIC ◷±



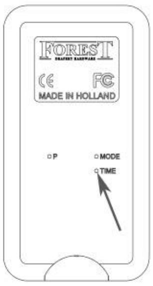
SELECT CHANNEL



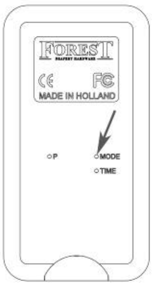
PRESS TIME FOR ~7SEC. → HOUR DIGITS WILL BLINK



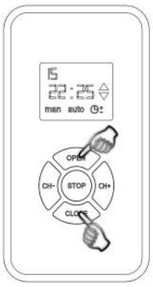
PRESS BUTTONS TO CHANGE OPEN▲ TIME



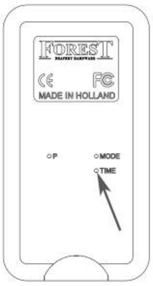
PRESS TIME TO TOGGLE BETWEEN HOURS/MINUTES



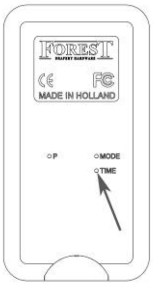
PRESS MODE TO SWITCH TO CLOSE▼TIME



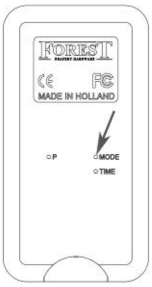
PRESS BUTTONS TO CHANGE CLOSE▼ TIME



PRESS TIME TO TOGGLE BETWEEN HOURS/MINUTES



PRESS TIME FOR ~7SEC. UNTIL DIGITS STOP BLINKING → FINISHED



SET MODE TO AUTO OR DYNAMIC ◷±

FOREST MULTI REMOTE - 5201001460

MODE EXPLANATION:
Mode manual (man): remote can only be used manually. Timer function is switched off.
Mode automatic (auto): timer is switched on, only for the selected channel. Select channel 00 (all channels) to engage on all timers.
Mode dynamic (◷±): same as automatic mode, open and close time will vary + and – 15 minutes.

FEATURES:
- When channel select is set to channel 00, all the channels 1 to 15 will respond to open and close.
- Default timer setting for every channel is: open 06:30AM, close 5:30PM.
- Dynamic mode: timer will vary open and close time between + and – 15 minutes. The first day dynamic mode is used the time will not vary.

FREQUENT ASKED QUESTIONS:
- Q: Clock doesn't start running after setting the time.
  A: Press time button on the back once more.
- Q: I can't succeed setting the time or the timer.
  A: The interval between pressing different button must be within 10 seconds.
- Q: When I set a timer, the display shows Er:01
  A: Time between open-time and close-time must be more than 30 minutes apart.
- Q: Timer only works on one channel.
  A: Only the selected channel will work as a timer. Use channel 00 to turn on all timers (all channels).
- Q: I can't succeed programming a remote / wall switch RF to a receiver
  A: During programming, keep the remote / wallswitch RF close to the receiver (max 0,5 mtr)

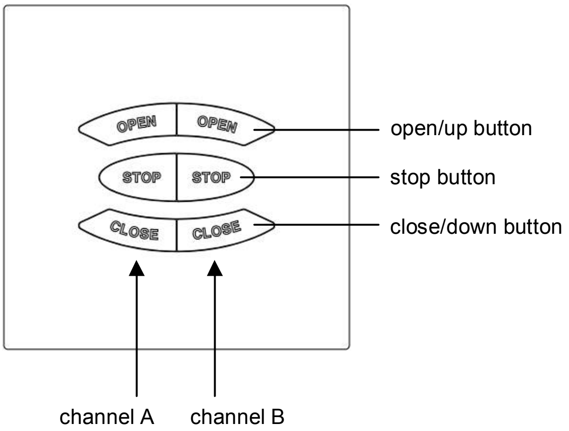
BATTERY EMPTY:
After changing the battery, only the time must be set. Programmed receivers will stay in memory of remote. Please follow the local regulations for disposal of the empty battery.

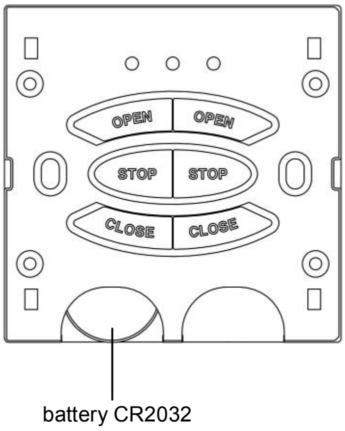
FOREST
DRAPERY HARDWARE

FOREST MULTI WALL SWITCH RF - 5201001470

TECHNICAL SPECIFICATION:

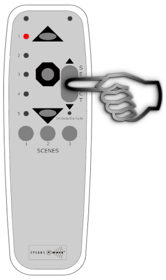
- 3V battery CR2032
- battery life > 3 years
- frequency 433.92MHz
- transmit power 10mW
- transmit range indoor max. 30mtr
- working temperature -10°C - +50°C
- each channel can control up to 20 receivers

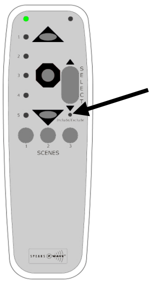


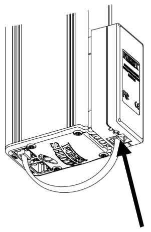


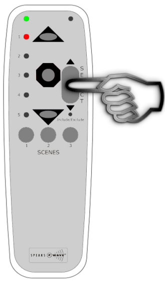
BATTERY EMPTY:
After changing the battery, programmed receivers and timers will stay in memory of remote. Please follow the local regulations for disposal of the empty battery.

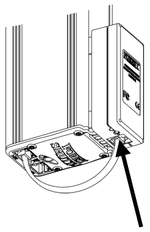
INCLUDING THE SHUTTLE IN A Z-WAVE NETWORK*:

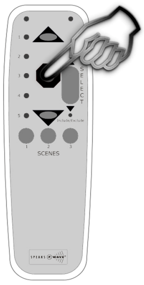

select channel


press include with pin,
green led will light up

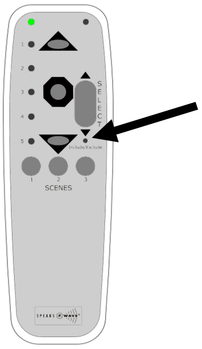

press button
on receiver

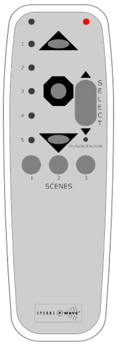

activate channel

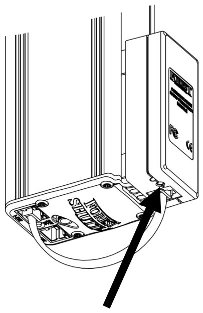

press button
on receiver

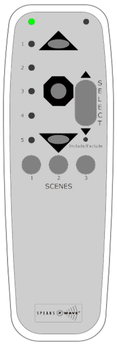

press stop
to finish

EXCLUDING THE SHUTTLE FROM A Z-WAVE NETWORK*:

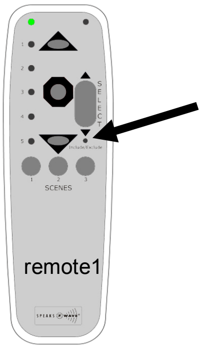

press include/exclude
button ~6sec.


red led will light up

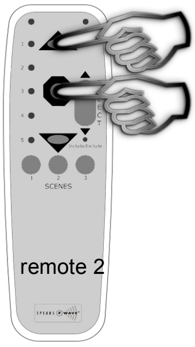

press button on receiver


green led will blink twice

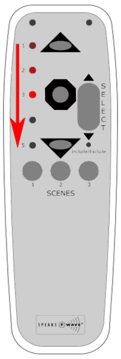
COPY UNIQUE REMOTE ADDRESS TO 2ND REMOTE*:



press include of 1st
remote with a pin



press open and stop of
2nd remote simultaneous


led 1 to 5 will blink fast,
address of remote1 is
now copied to remote 2

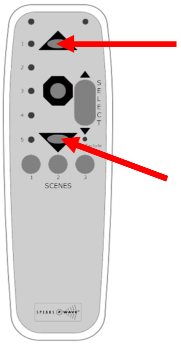
* Keep the remote close to the receiver/2nd remote (max 0,5 mtr).
In case of a 3rd party remote/receiver, consult the corresponding manual.
To reset a (second) copied remote to its origional unique address, press and hold the SELECT ▲ and ▼ buttons simultaneously for ~5 seconds until all 7 leds light up.

Note: in case receiver/remote does not respond, reset receiver to default by pressing the button on the receiver for ~5 seconds until red led lights up. Then try again to include.

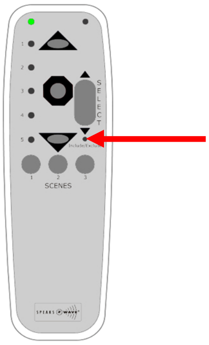
SCENE SETTING WITH Z-WAVE REMOTE

Scene setting (intermediate positions) on a Shuttle track can only be use in combination with the Forest Z-wave remote. All 3 scenes can be set in the full range between open and close.

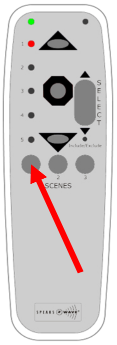
NOTE: In order to make the scene setting work correctly, make sure that the curtain track is assembled in the way as shown below, to aviod changing the motor direction of the Shuttle. Also make sure the open and close limits are set.



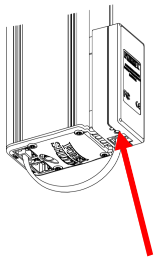
press open/close buttons to select desired position of the curtian



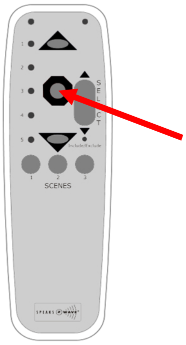
press include with pin, green led will light up



press the desired scene button, associated led will blink



press button on receiver



press stop button to finish

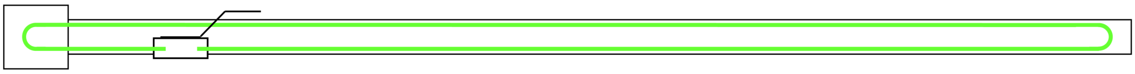
For setting scene 2 and 3 use the same steps as above, only change scene button 2 or 3. Associated leds (2 or 3) will blink.

In case of 5 Shuttles, the scene buttons can be used as 'ALL' – buttons. Program every Shuttle open position to scene 1, close position to scene 2. Then scene 1 button is the 'ALL OPEN' – button, scene 2 button is the 'ALL CLOSE' – button.

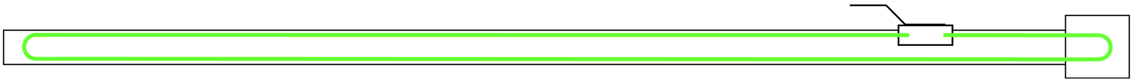
Method of assembling the toothed belt to avoid changing the motor direction of the Shuttle.

The view is like when you assemble, you look into the track. Backside of the track on the table, topview.

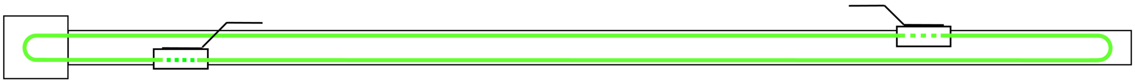
Motor left
single curtain



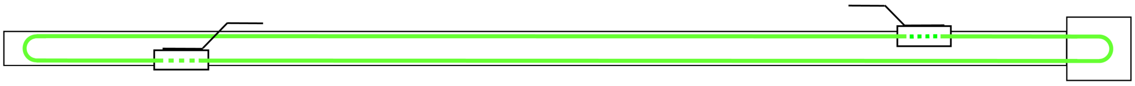
Motor right
single curtain



Motor left
double curtain



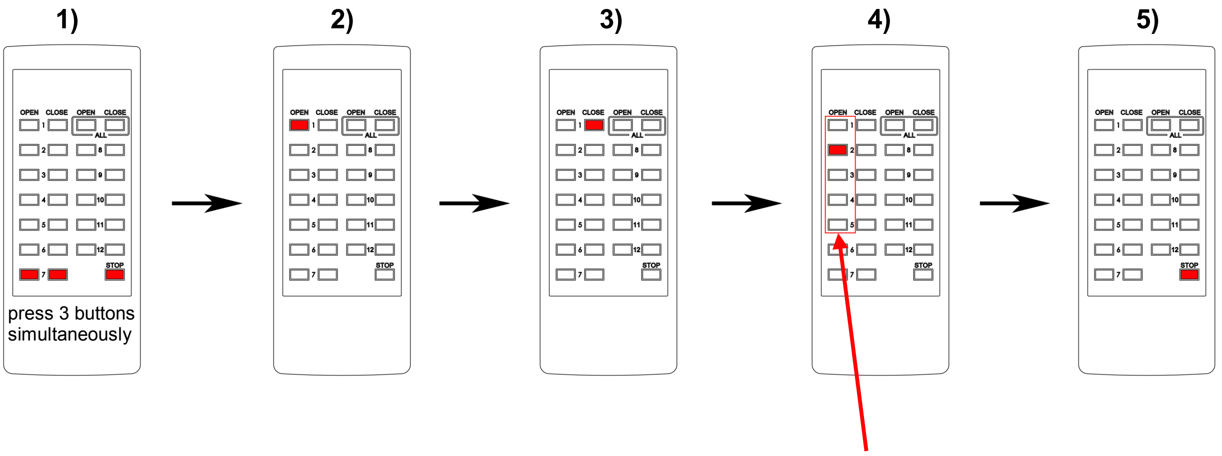
Motor right
double curtain



Programming IR channels on Forest Shuttle

To program a Forest Shuttle to a different channel you need a 12 channel IR remote control (5201002250).
The default setting of the Forest Shuttle is channel 1.
To programming a Forest Shuttle put the connector of the IR module in port 1-eye of the Forest Shuttle that you want to program. Remove the IR module from other Forest Shuttles in the same room, otherwise the other Forest Shuttles will be programmed too.

Aim the remote control to the IR eye.
For re-programming to channel 2 press the next buttons on the remote control:



press 3 buttons simultaneously

For programming to channel 3 to 5 press the same buttons as above, this button represents the channel number. Channel 3: button OPEN3, channel 4: button OPEN4, channel 5: button OPEN5.

When after re-programming you want to change the channel again: follow the same steps as above, only at step **2)** use the previous re-programmed channel number.
For example: the Shuttle is re-programmed to channel 2, this must be channel 3 → press next buttons:

OPEN7+CLOSE7+STOP → OPEN2 → CLOSE1 → OPEN3 → STOP

The ALL-buttons will open and close all channels.

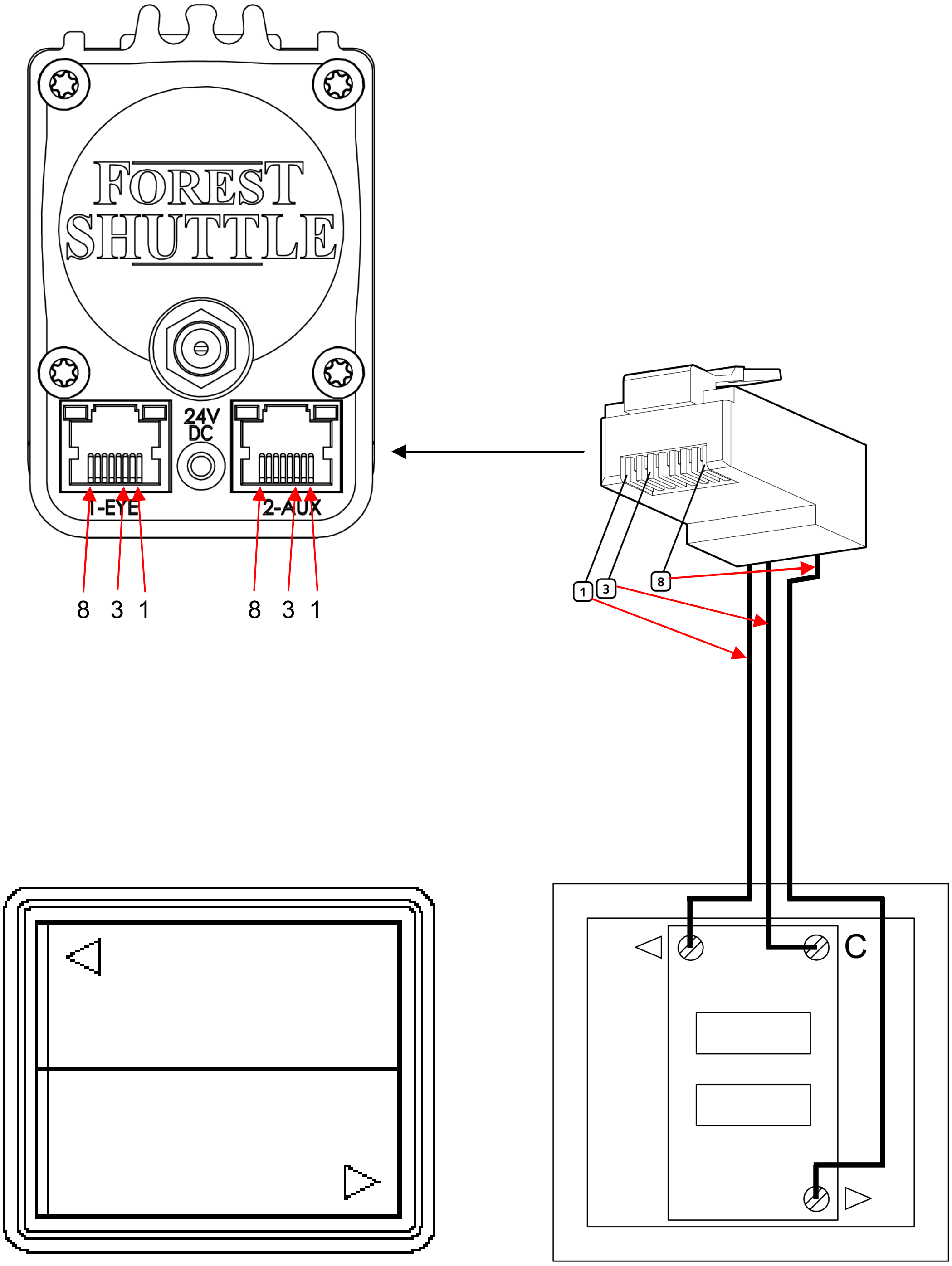
It is also possible to use universal remote controls (like Logitech, Phillips, Sony, One for All) to control the Forest Shuttle. It must be a learnable remote. Follow the instructions of the universal remote control.

Note: when the Forest Shuttle is reset to default by means of the configuration button on the Forest Shuttle, then the IR channel is also reset to default (channel 1).

CONNECTING THE WALLSWITCH

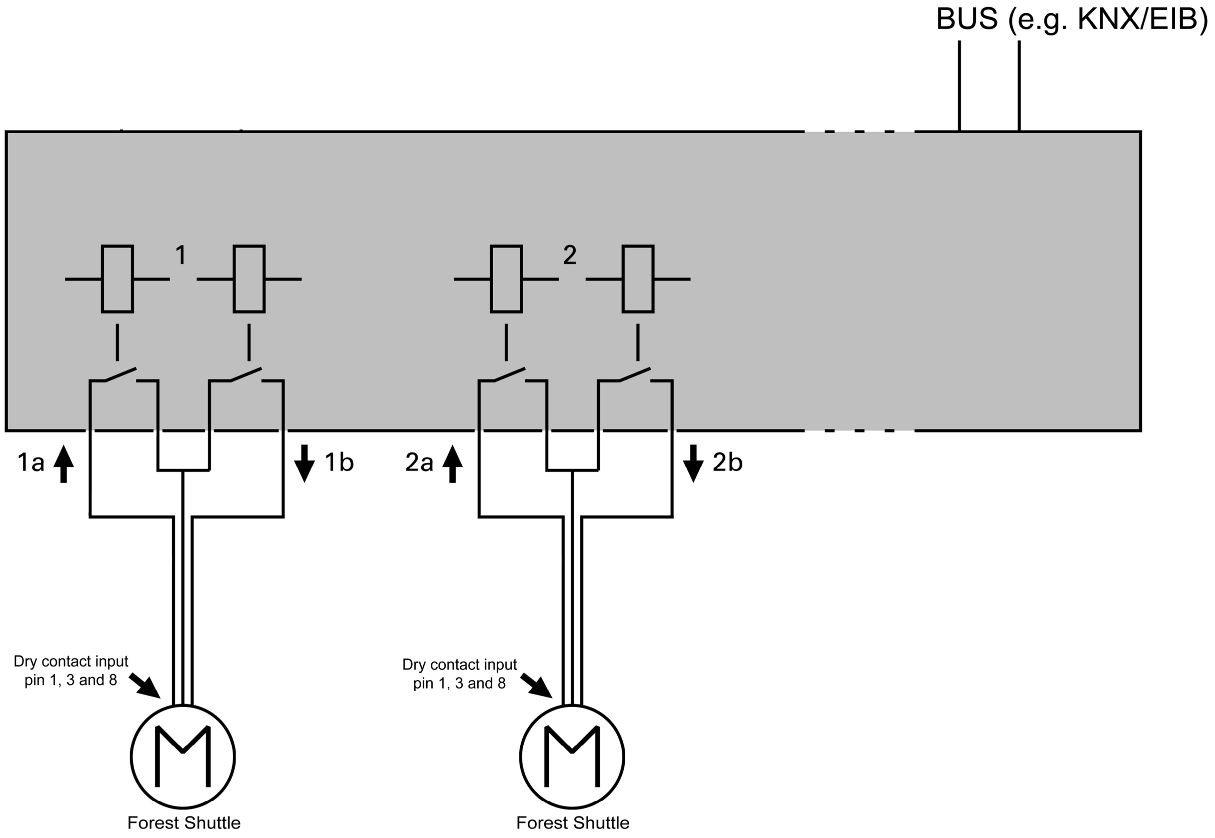
Either of the 2 ports (1-EYE or 2-AUX) can be used to connect a (pulse) switch to open, close or stop the drapery. This is called a dry contact connection.
Pins 1, 3 and 8 are used for this. If pins 3 (common) and 1 (open) are connected by means of the switch then the drapery will OPEN. If pins 3 (common) and 8 (close) are connected then the drapery will CLOSE.
A standard network cable can be used for this, connect only 3 wires to the wall switch. When the copper wire is too thin to connect, use a ferrules, like:

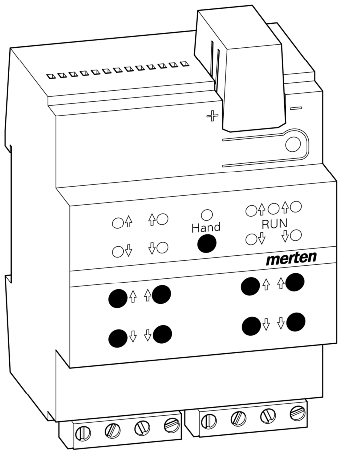
Internal pins 1 and 8 are not connected between ports 1 and 2. Use a splitter to 'daisychain' Shuttle motors.
These ports can also be used for home automation systems. Be sure the switching (relay) outputs are dead! (free of potential).



Building automation wiring diagram for Forest Shuttle

For control of a Forest Shuttle by a building automation system an actor is needed. If the building automation system already has relay outputs, then an actor is not needed. The relays output must be dead! (free of potential)
Different brands and protocols are possible, in this diagram the basic principle is shown. Used in this diagram is KNX, but can also be AMX, Lutron, Creston etc.
Depending of the kind of switching, the manual input of the Shuttle must be reprogrammed, like on page 26 of the user and installation manual (option 2).


BUS (e.g. KNX/EIB)
1
2
1a
1b
2a
2b
Dry contact input pin 1, 3 and 8
Dry contact input pin 1, 3 and 8
Forest Shuttle
Forest Shuttle

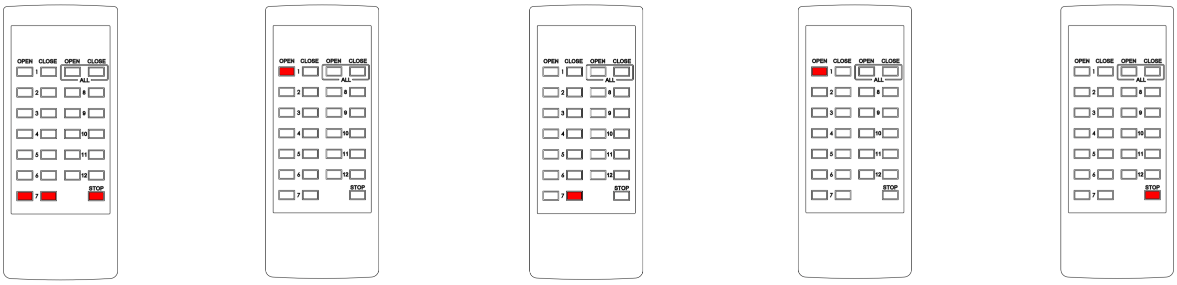

Hand
RUN
merten

Shuttle manual input features

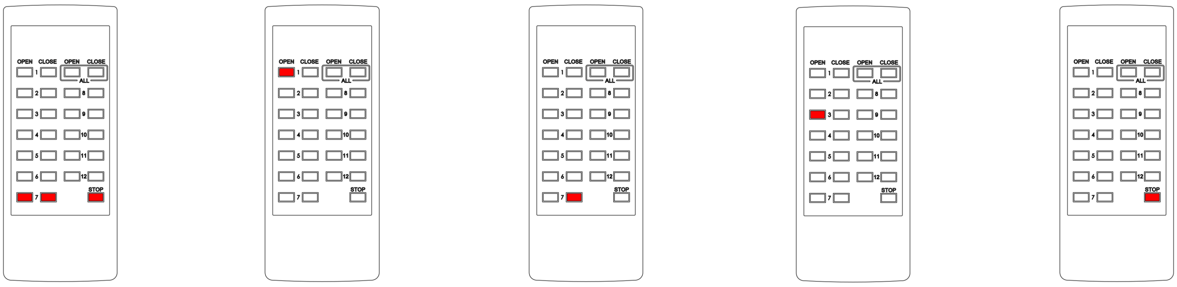
The default setting of the manual input of the Shuttle:
- pulse connection between pin 3 and 1 → system OPENS,
- pulse connection between pin 3 and 8 → system CLOSES.

Manual input of the Shuttle can be programmed different with a Shuttle IR programming remote 5201002250 and a Shuttle IR receiver 5201001260:

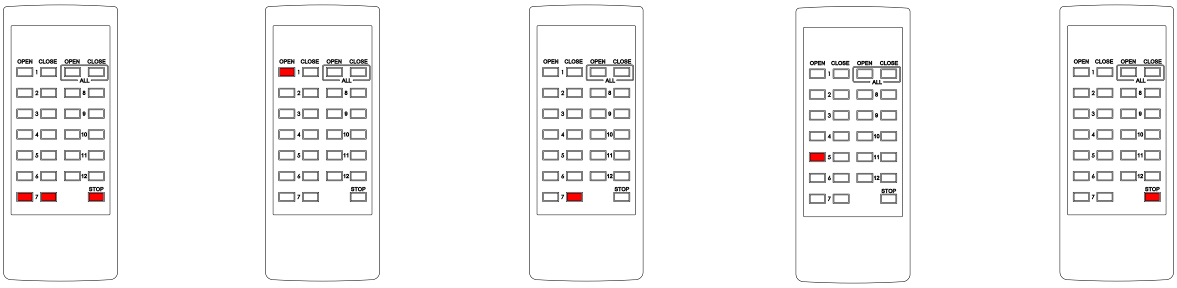
1) SPST 3 8 : pulse connection between 3 and 8: → OPEN → STOP → CLOSE → STOP


OPEN
CLOSE
OPEN
CLOSE
ALL
STOP

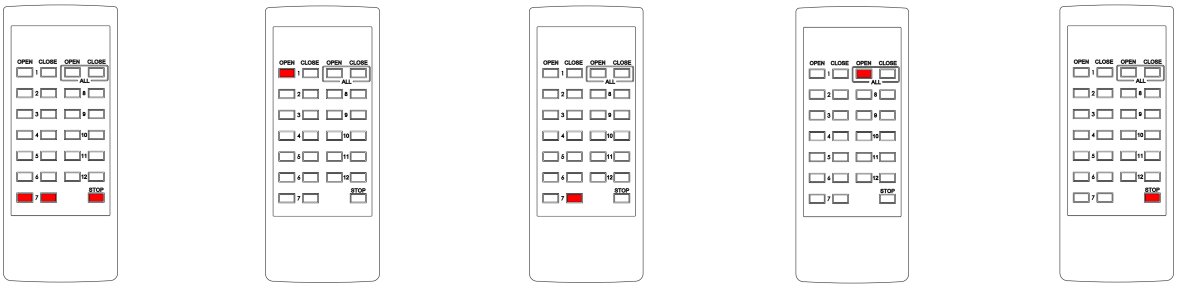
2) STOP on SPDT 1 3 8 **manual input release** (in case when pulse contacts are not available):
- connection between pin 3 and 1 → system OPENS until connection is released,
- connection between pin 3 and 8 → system CLOSE until connection is released.


OPEN
CLOSE
OPEN
CLOSE
ALL
STOP

3) Swap OPEN and CLOSE on SPDT, invert SPST:


OPEN
CLOSE
OPEN
CLOSE
ALL
STOP

Reset manual input features


OPEN
CLOSE
OPEN
CLOSE
ALL
STOP

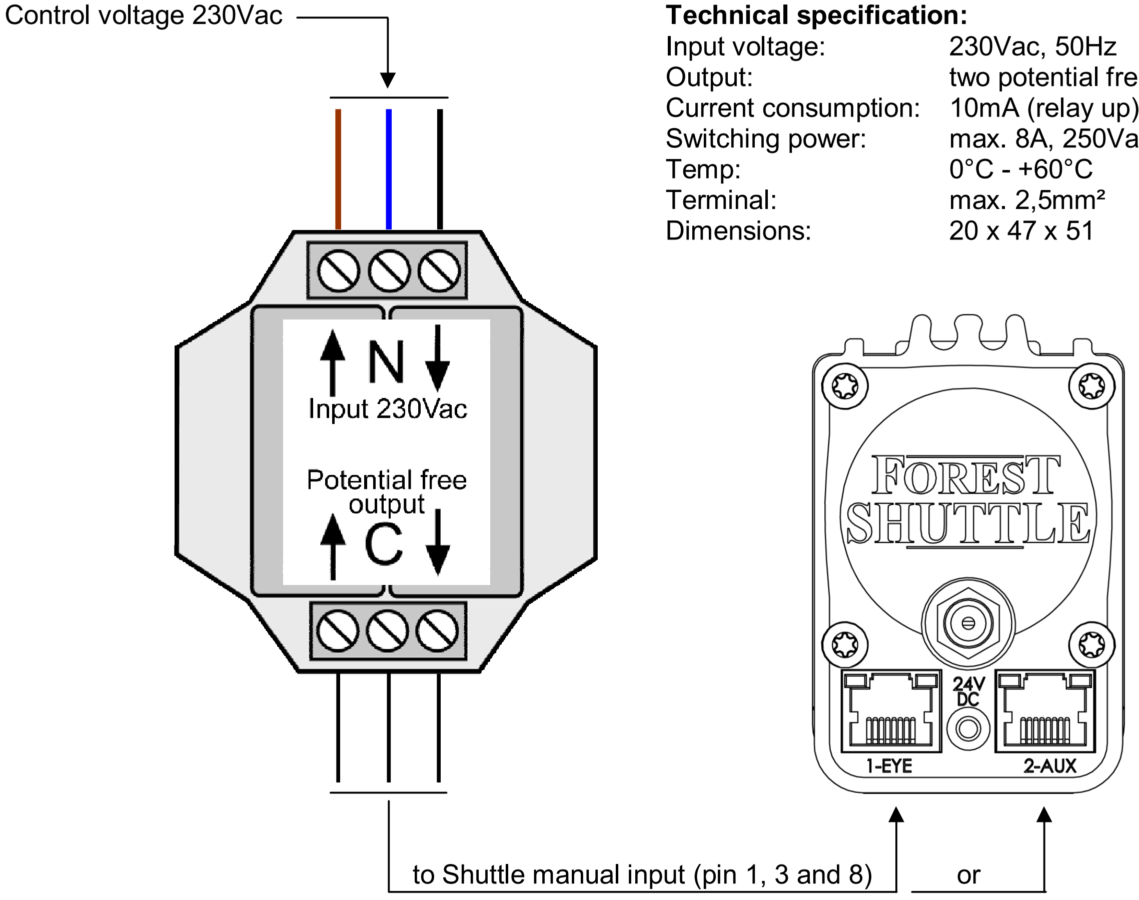
Note: manual input features are also reset to default setting when the Shuttle is reset to default by means of configuration button on Shuttle motor.

POTENTIAL FREE RELAY 5201002230

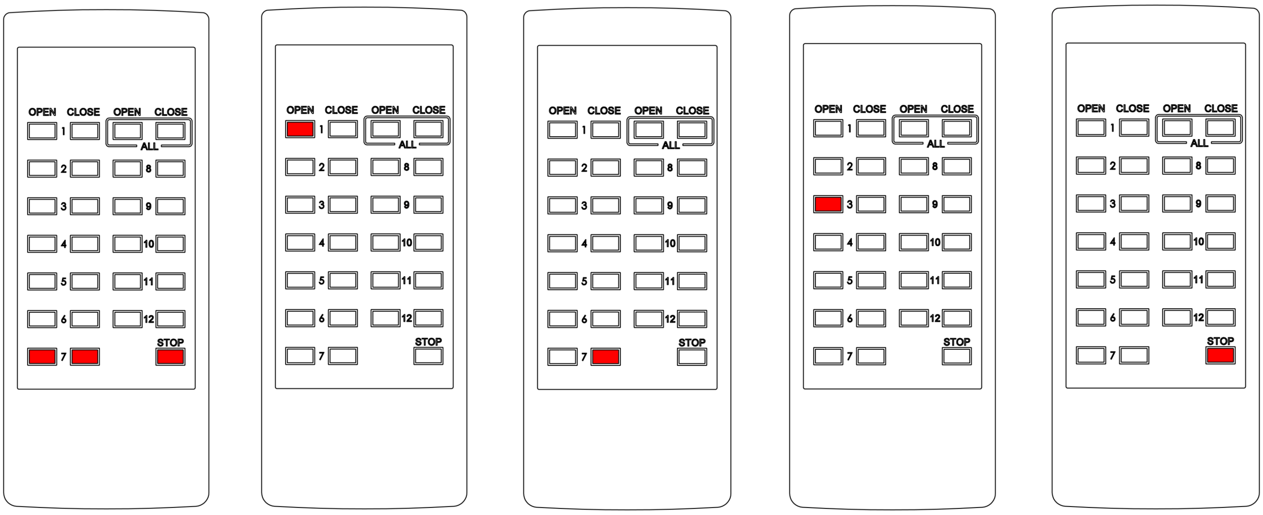
With this relay 230Vac control signals (for FMS or tubular motor) can be converted to two potential free contacts. These potential free contacts can be used to control Forest Shuttle motors.

Technical specification:

Input voltage:	230Vac, 50Hz
Output:	two potential free contacts
Current consumption:	10mA (relay up)
Switching power:	max. 8A, 250Vac
Temp:	0°C - +60°C
Terminal:	max. 2,5mm²
Dimensions:	20 x 47 x 51


Control voltage 230Vac
N
Input 230Vac
Potential free output
C
FOREST SHUTTLE
24V DC
1-EYE
2-AUX
to Shuttle manual input (pin 1, 3 and 8)
or

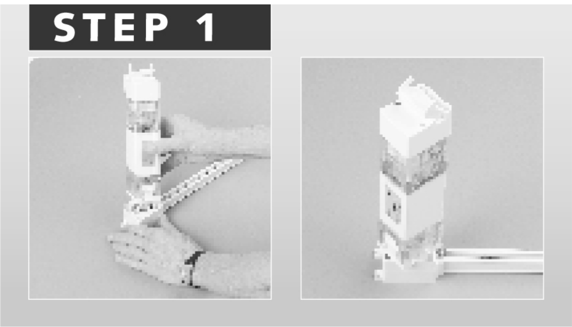
When the 230Vac control signal is not a pulse signal: change the manual input setting of the Shuttle(s) with a programming IR remote like shown below. Aim the remote control to the IR eye.
To set this you need: programming IR remote (5201002250) and IR receiver (5201001260).


OPEN
CLOSE
OPEN
CLOSE
ALL
1
2
3
4
5
6
7
8
9
10
11
12
STOP

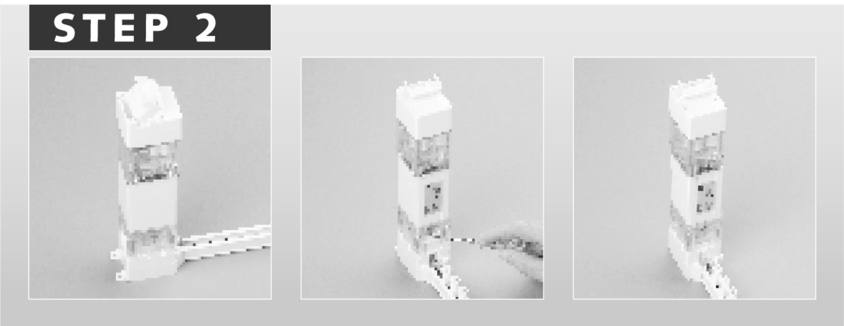
Note: when the Forest Shuttle is reset to default by means of the configuration button on the Forest Shuttle, then the manual input setting is also reset to default (not stop on manual input release).

FIXING FMS ONTO FMS TRACK

Please see page 3 – 6 for assemly of the track



First position the motor sideways onto the motor pulley.



Now twist the motor onto the motor pulley so the locking slide is aligned, and push it into the motor pulley. Now the motor is ready for set-up and operation.

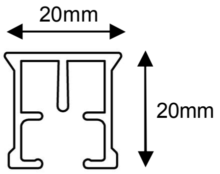
TECHNICAL INFORMATION FMS MOTOR

SPECIFICATIONS FMS MOTOR:

Torque:	0.8 / 1.2Nm / 1.8Nm (30 / 45 / 60Watt)
Speed:	100rpm ≈ 15cm/sec
Voltages:	110Vac – 60Hz / 230Vac – 50 Hz
Operating temperature:	0-50°C / 32-122°F
Max. runing time:	5 minutes
Weight per carrier:	1,0kg – max. 10kg/mtr
CE / FCC / UL approval	

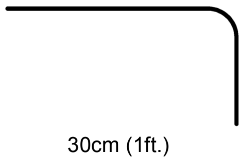
SPECIFICATIONS TRACK:

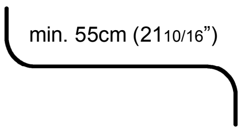
Weight:	303 gr/mtr (3.25 ounce/ft)
Size:	20x20mm (0.79x0.79 inch)
Material:	Aluminium extrusion 6063 T5
Finish:	Powder coated, lubricated
Available lenghts:	5.80mtr and 7.00mtr

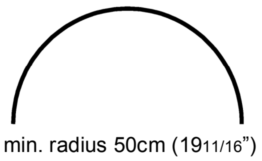


BENDING/CURVING:

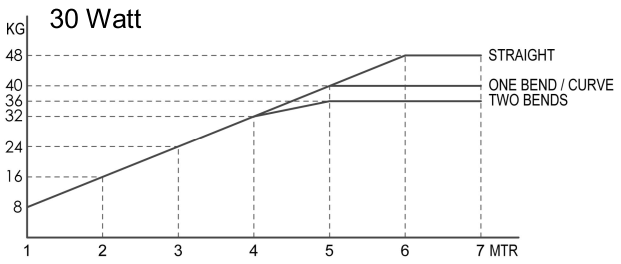
The FMS motor can be used in a track with one or two bends of 90 degrees. The track can be curved and reversed curved in any horizontal direction with a radius of 20cm (8 inch). Bends with a larger radius and continuous curves can be made with the electrically powered bending tool.

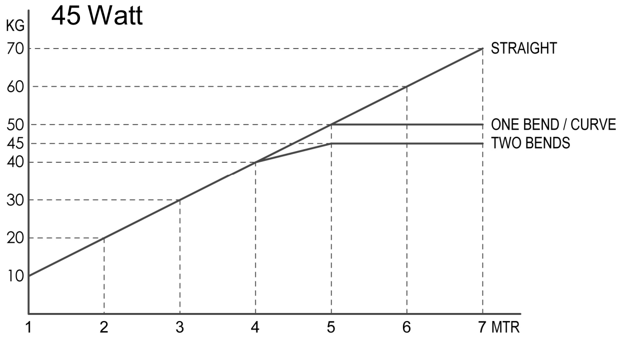


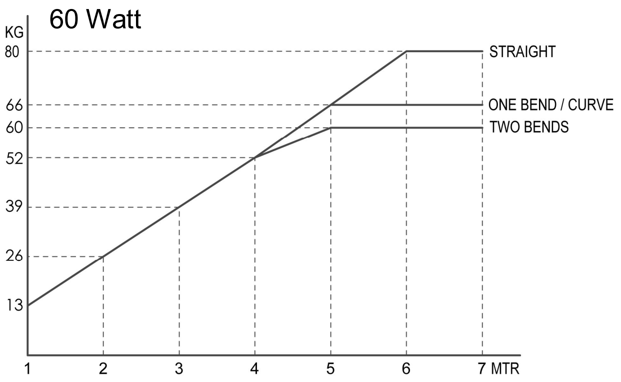




LOAD TABLE (with carriers):

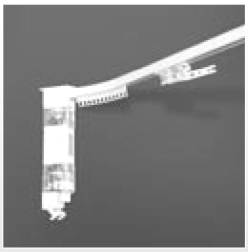






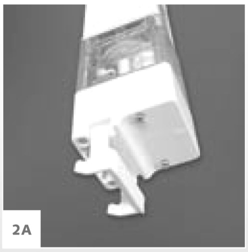
STEPS TO SET THE LIMITS OF THE FMS MOTOR

STEP 1

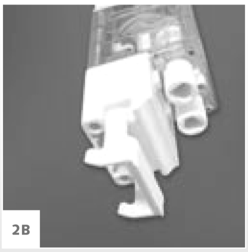


Preferably set the limits of the motor with the motor in a hanging position. Ensure that the Master Carriers of the system are in the open position, meaning the intended position where you want the master carriers to stop when the curtain is open.

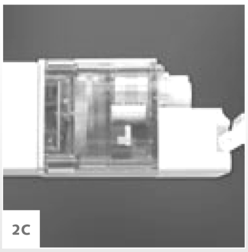
STEP 2



2A



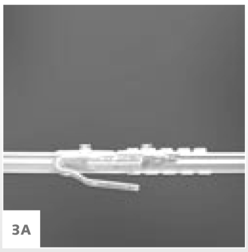
2B



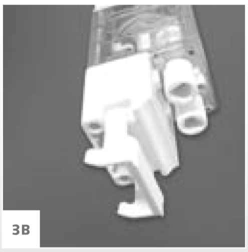
2C

- Ensure that the two buttons on the bottom of the motor are visible, by removing the white cap of the motor (2A).
- Ensure that the two coloured wheels (on the photo depicted as white yellow- white wheels) are in a neutral position. The position in which the indentations in each of the three wheels are in line. This is called the “zero-situation” (2C). The motor comes standard with this setting.

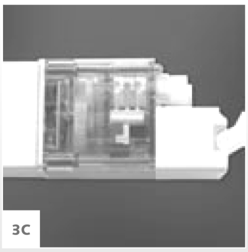
STEP 3



3A



3B



3C

- Switch on the power
- Press and turn one of the buttons to find out which button you need to set the masters in closed or open position
- Because you already moved the masters in the open position you only have to select the setting wheel for the closed position
- Press and turn the selected button until the masters have reached the intended ‘closed’ position.
- Turn off the power. Press and turn the selected button again to set back the white-yellow-white wheels in the neutral position. You have set the limits now.
- To save the settings put the safety clip in the middle position.

STEP 4

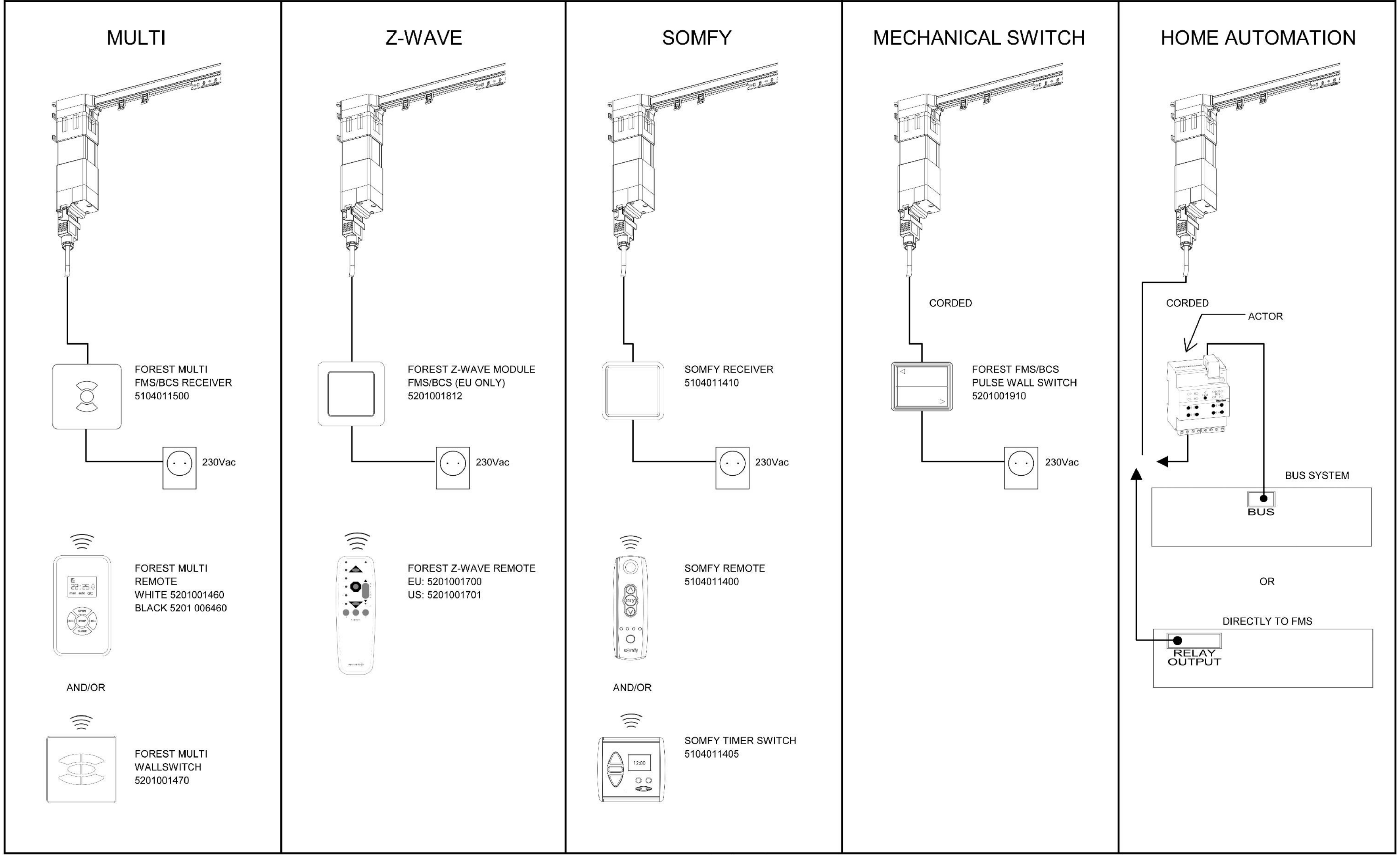
In order to check if the settings are correct, move the masters by using the remote or the wall switch to the open and closed position.
If, for example, the masters are not fully closing in the middle you have to reset this position.

STEP 5

Now close the system again and you will see that it stops automatically where you have set the limits as described in step 3.

FOREST
DRAPERY HARDWARE

WAYS TO OPERATE FMS



RF WIRELESS

MULTI

FOREST MULTI
FMS/BCS RECEIVER
5104011500

230Vac

FOREST MULTI
REMOTE
WHITE 5201001460
BLACK 5201 006460

AND/OR

FOREST MULTI
WALLSWITCH
5201001470

Z-WAVE

FOREST Z-WAVE MODULE
FMS/BCS (EU ONLY)
5201001812

230Vac

FOREST Z-WAVE REMOTE
EU: 5201001700
US: 5201001701

SOMFY

SOMFY RECEIVER
5104011410

230Vac

SOMFY REMOTE
5104011400

AND/OR

SOMFY TIMER SWITCH
5104011405

WIRED

MECHANICAL SWITCH

CORDED

FOREST FMS/BCS
PULSE WALL SWITCH
5201001910

230Vac

HOME AUTOMATION

CORDED

ACTOR

BUS SYSTEM

BUS

OR

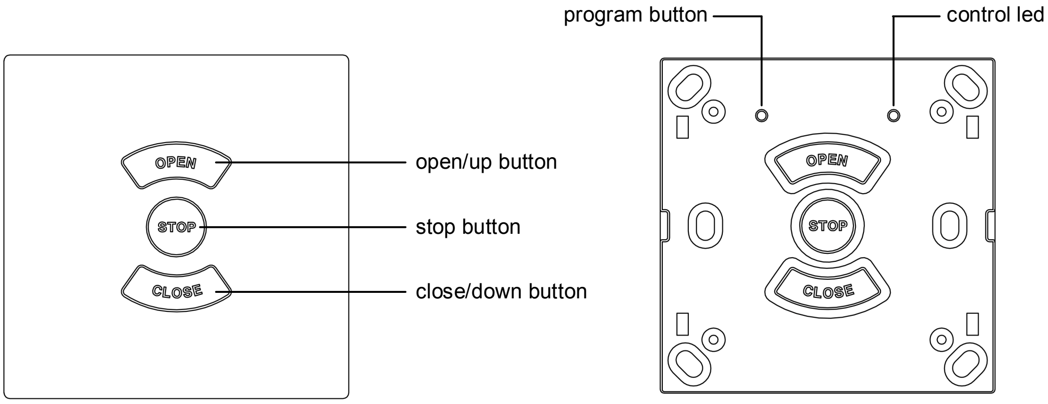
DIRECTLY TO FMS

RELAY
OUTPUT

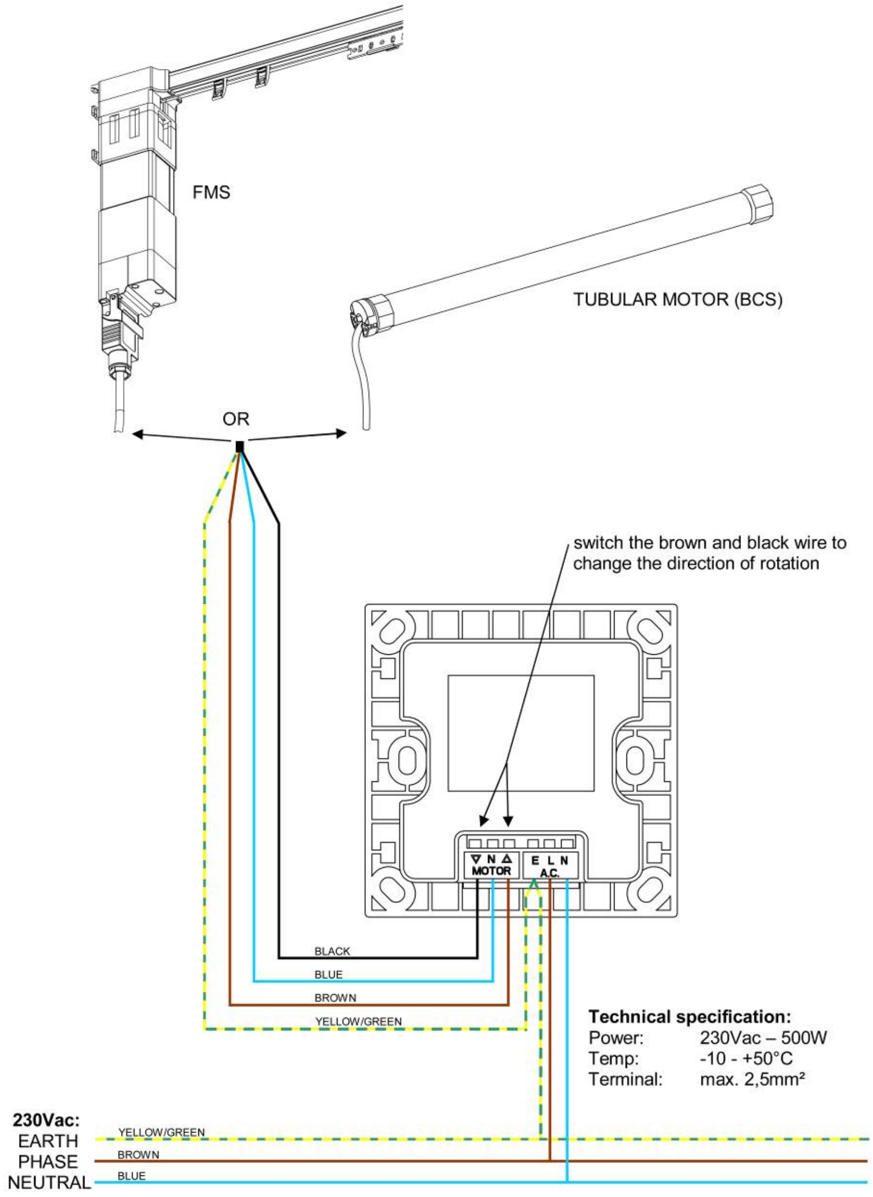
FOREST FMS/BCS MULTI RECEIVER - 5104011500

TECHNICAL SPECIFICATION:

- power 230Vac – 500W
- controls one motor
- can also be used as wall switch
- works on to Forest Multi Remote and Forest Multi Wall Switch RF
- terminal max 2,5mm²
- one channel
- working temperature -10°C - +50°C
- programming identical to Shuttle Multi Receiver


program button
control led
OPEN
STOP
CLOSE
open/up button
stop button
close/down button
OPEN
STOP
CLOSE

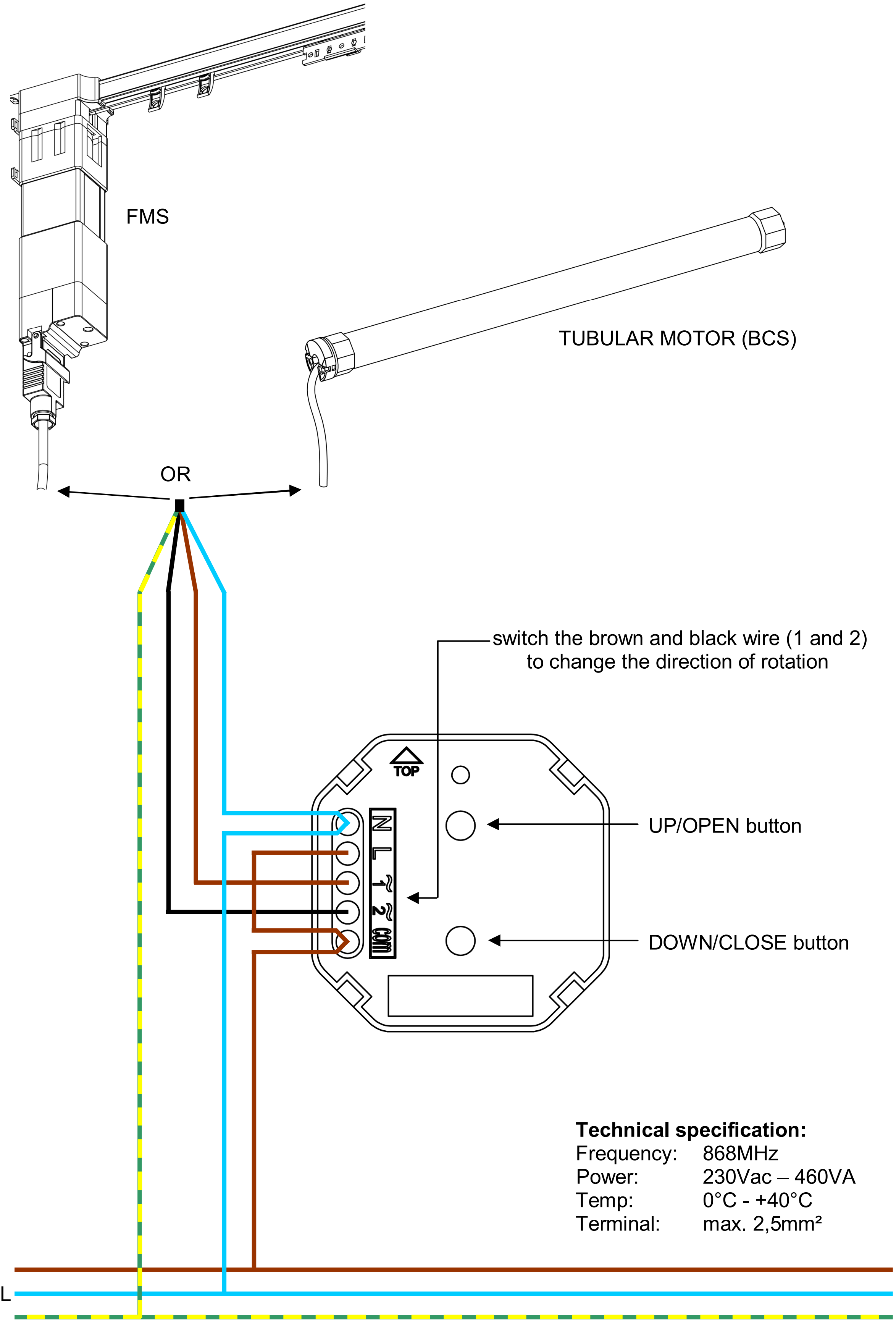
WIRING DIAGRAM:


FMS
TUBULAR MOTOR (BCS)
OR
switch the brown and black wire to change the direction of rotation
▽ N △
MOTOR
E L N
A.C.
BLACK
BLUE
BROWN
YELLOW/GREEN
230Vac:
EARTH
PHASE
NEUTRAL
YELLOW/GREEN
BROWN
BLUE

Technical specification:

Power:	230Vac – 500W
Temp:	-10 - +50°C
Terminal:	max. 2,5mm²

FMS/BCS Z-WAVE RECEIVER - 5201001812


FMS
TUBULAR MOTOR (BCS)
OR
switch the brown and black wire (1 and 2)
to change the direction of rotation
TOP
N
L
~1
~2
com
UP/OPEN button
DOWN/CLOSE button
230Vac:
PHASE
NEUTRAL
EARTH

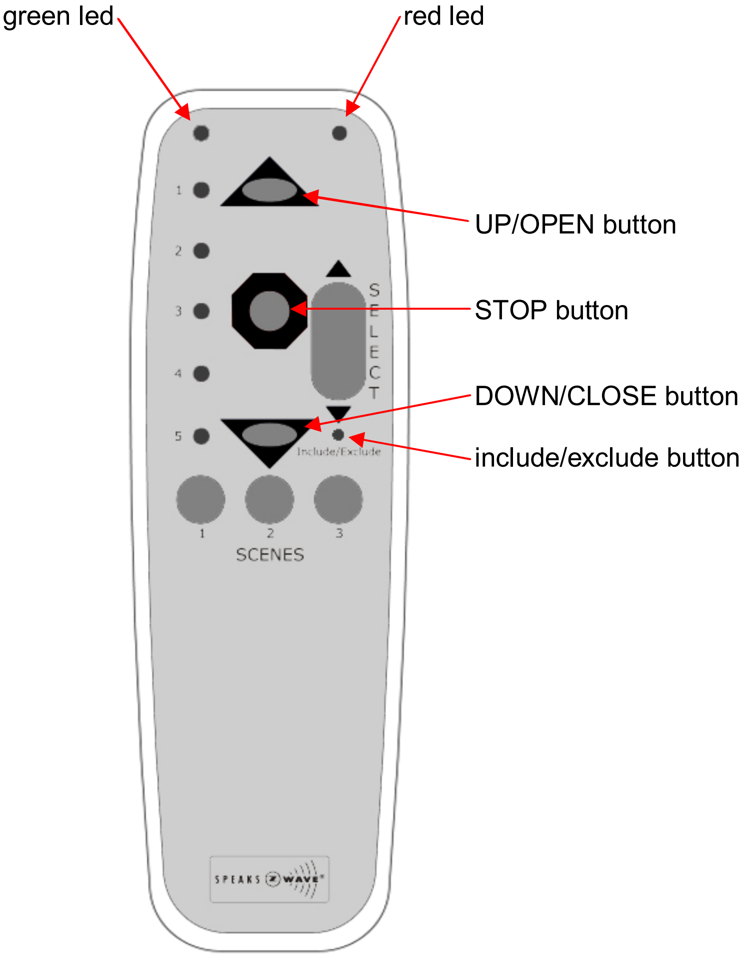
Technical specification:

Frequency:	868MHz
Power:	230Vac – 460VA
Temp:	0°C - +40°C
Terminal:	max. 2,5mm²

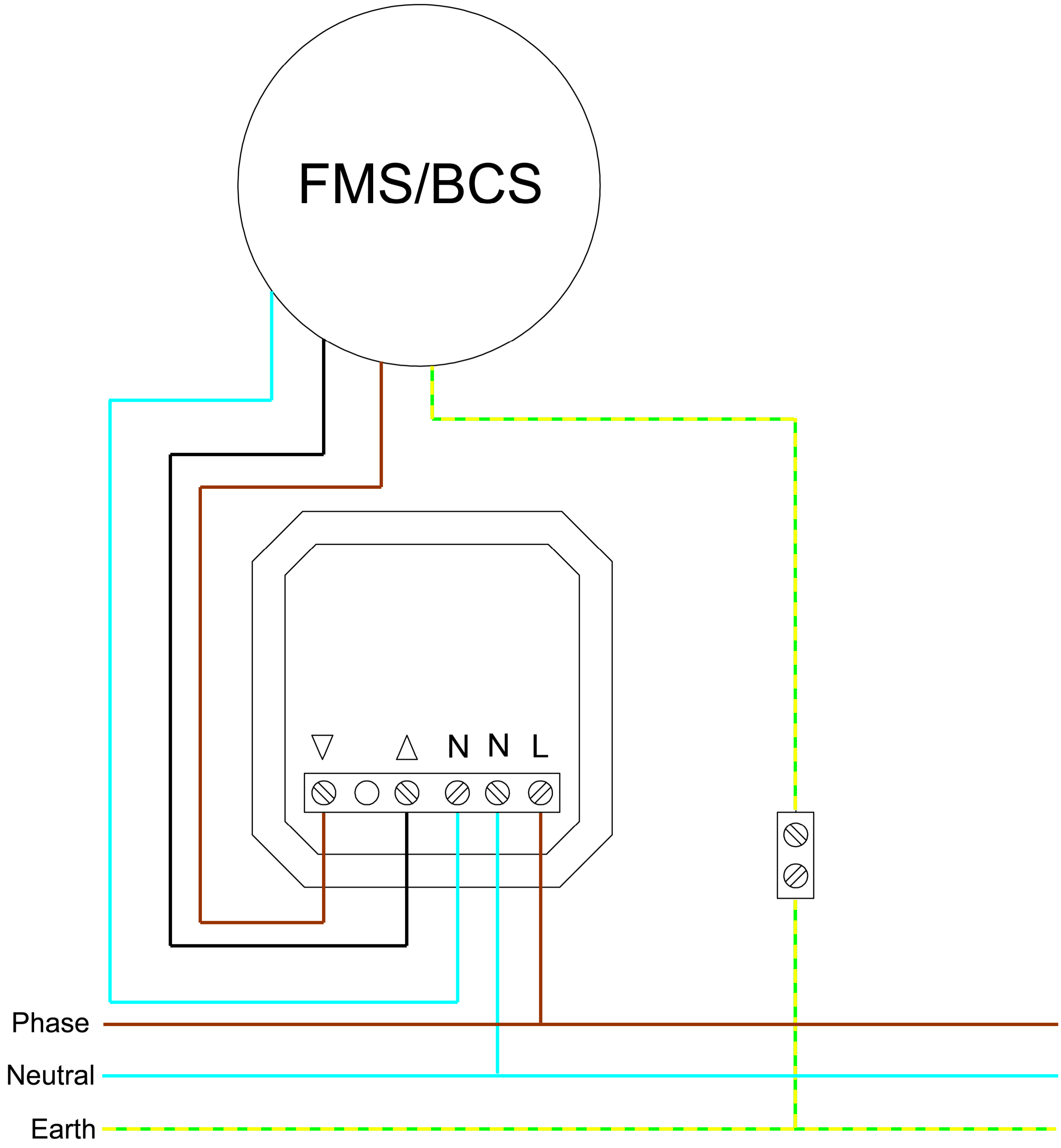
Including a FMS/BCS receiver into a Z-wave controller network:

Steps:
1) select channel on the controller by pressing the select button
2) press include/exclude button with a pin, green led on remote will light up
3) press the channel up or down button to activate the channel
4) press 3x quick the UP button on the Z-wave receiver, green led on remote blinks once
5) press stop button on controller, including is completed.
Keep the Z-wave remote next to the Z-wave receiver during these steps.

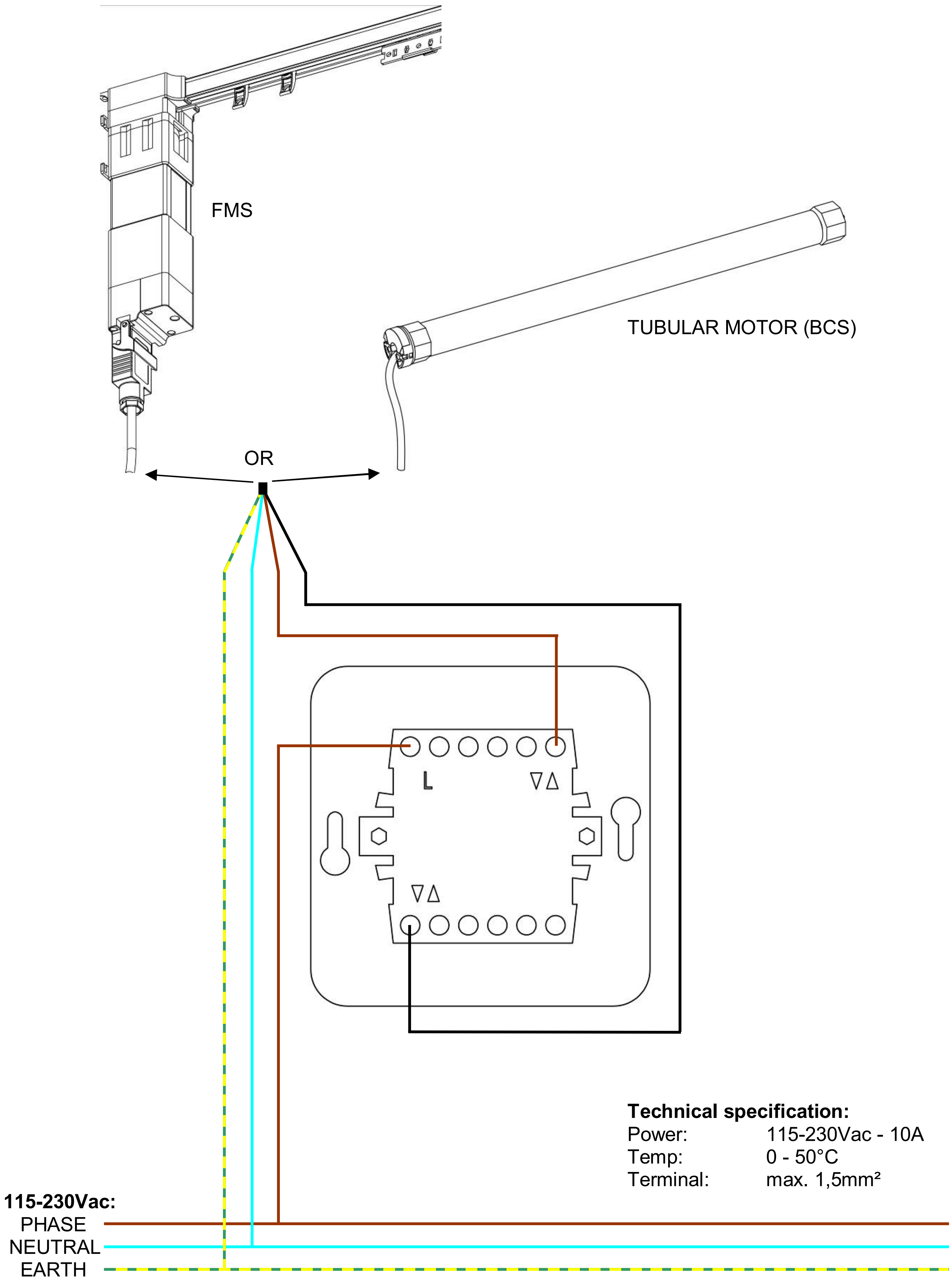
Excluding a FMS/BCS receiver from a Z-wave controller network:
Press and hold the include/exclude button with a pin (~6 sec.) until the red led on the remote lights up. Press 3x quick the UP button on the Z-wave receiver. The green led on the remote will blink once. Excluding the Forest Shuttle is completed. Keep the Z-wave remote next to the Z-wave receiver during these steps.


green led
red led
UP/OPEN button
STOP button
DOWN/CLOSE button
include/exclude button
1
2
3
4
5
SELECT
Include/Exclude
1
2
3
SCENES
SPEAKS Z-WAVE

SOMFY RECEIVER FOR FMS / BCS - 5104011410


FMS/BCS
▽
△
N
N
L
Phase
Neutral
Earth

FMS / BCS PULSE WALL SWITCH - 5201001910

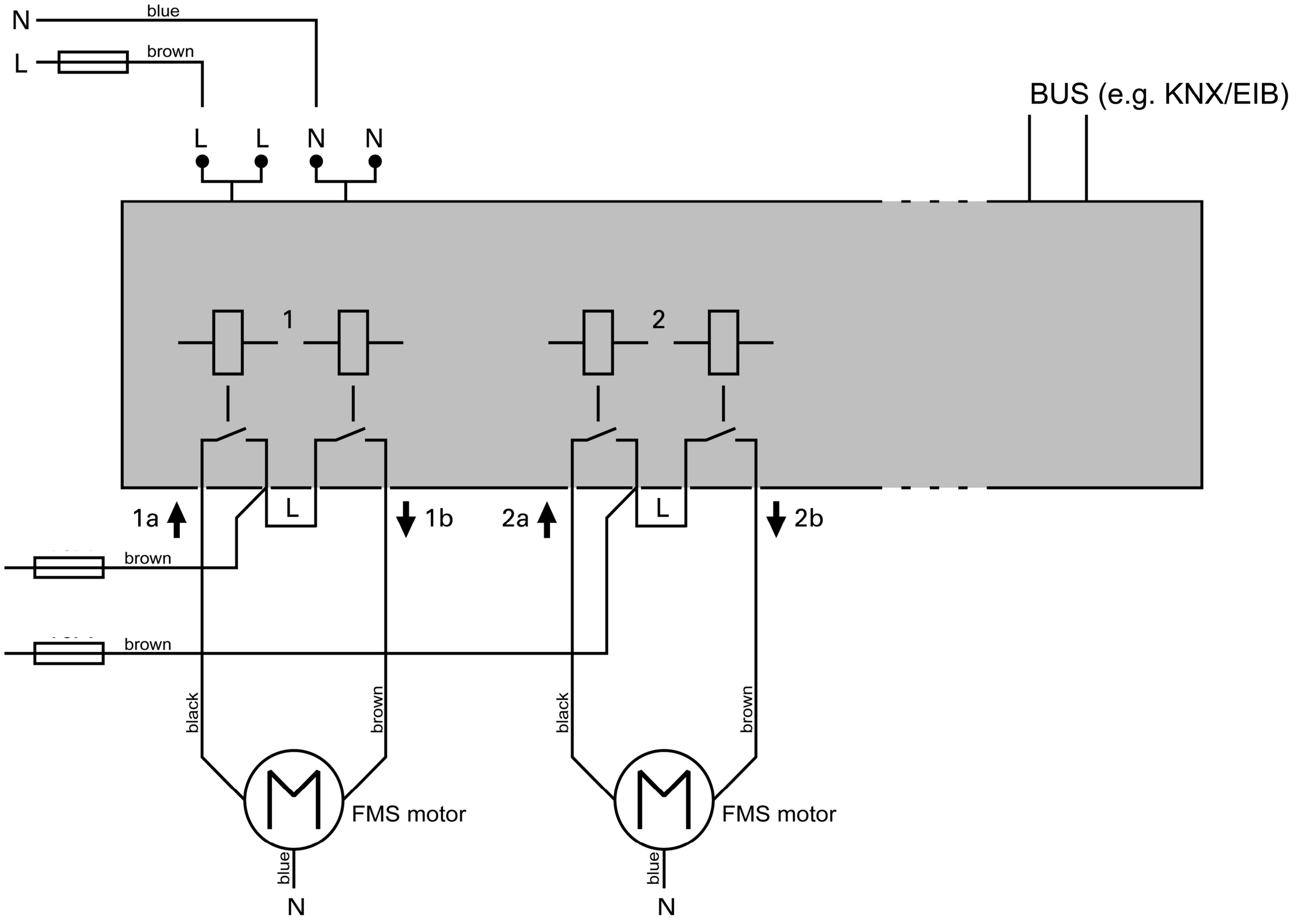

FMS
TUBULAR MOTOR (BCS)
OR
L
∇∆
∇∆
115-230Vac:
PHASE
NEUTRAL
EARTH

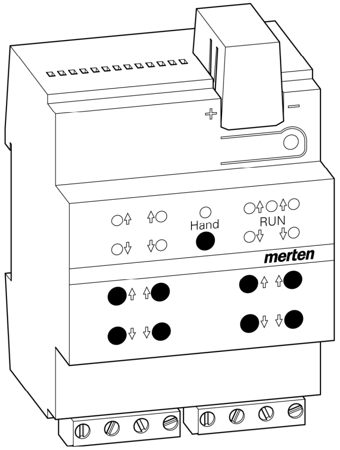
Technical specification:

Power:	115-230Vac - 10A
Temp:	0 - 50°C
Terminal:	max. 1,5mm²

Building automation wiring diagram for FMS / BCS

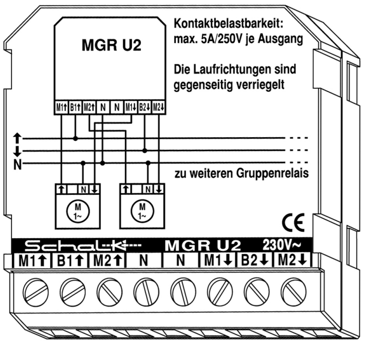
For control of a FMS (Forest Motorized System) or BCS (Blind Contract System) by a building automation system an actor is needed. If the home automation system already has relay outputs, then an actor is not needed.
Different brands and protocols are possible, in this diagram the basic principle is shown. Used in this diagram is KNX, but can also be AMX, Lutron, Creston etc.
Motors have to be connected to earth according to local standards.


N
blue
L
brown
BUS (e.g. KNX/EIB)
L
L
N
N
1
2
1a
L
1b
2a
L
2b
brown
brown
black
brown
black
brown
FMS motor
FMS motor
blue
N
blue
N


Hand
RUN
merten

MOTOR GROUP RELAY - 5201002240

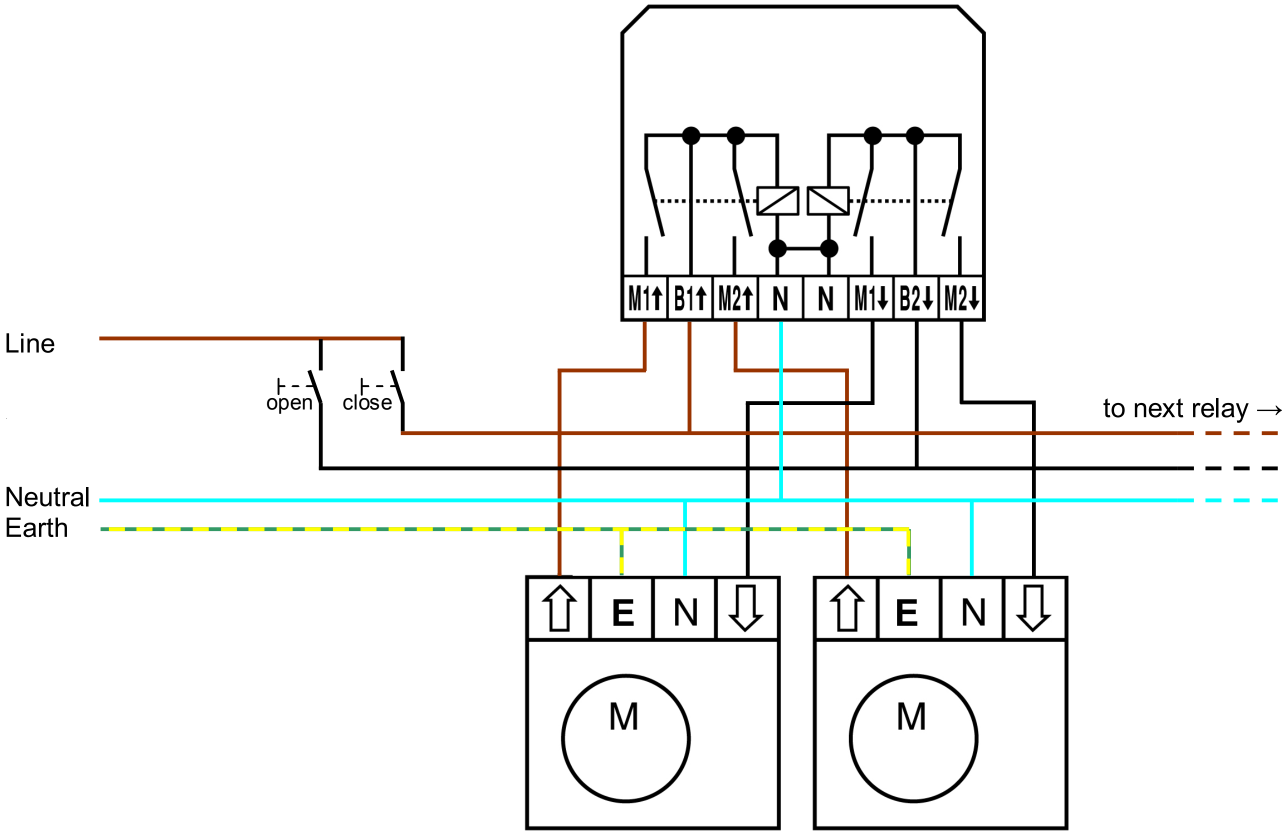
For electrical decoupling of FMS or tubular motors in parallel connection.
The FMS and tubular motors with mechanical limit-switches must as a rule not be electrically connected directly in parallel, because due to the different motor running times the limit-switches of some motors may be reached while other motors are still running. The motors that are already switched off would then receive inductive voltage at the counter-winding from the motors that are still running, which can lead to destruction of the limit-switches. The Motor Group relay is providing an extremely simple method of achieving a (functional) parallel circuit. Several relais can be connected parallel.


MGR U2
Kontaktbelastbarkeit:
max. 5A/250V je Ausgang
Die Laufrichtungen sind gegenseitig verriegelt
zu weiteren Gruppenrelais
N
Schalk
MGR U2
230V~
M1↑ B1↑ M2↑ N N M1↓ B2↓ M2↓

Technical specification:

Operating voltage:	230Vac 50Hz
Power consumption:	0.6W
Relay contacts:	4 NO contacts, 10A/250Vac
Ambient temperature	-10°C to +45°C
Terminal:	max. 2.5mm²
Dimensions:	43x43x18.5mm
Weight approx.:	40g

Wiring diagram:


M1↑
B1↑
M2↑
N
N
M1↓
B2↓
M2↓
Line
open
close
to next relay →
Neutral
Earth
⇧
E
N
⇩
M
⇧
E
N
⇩
M

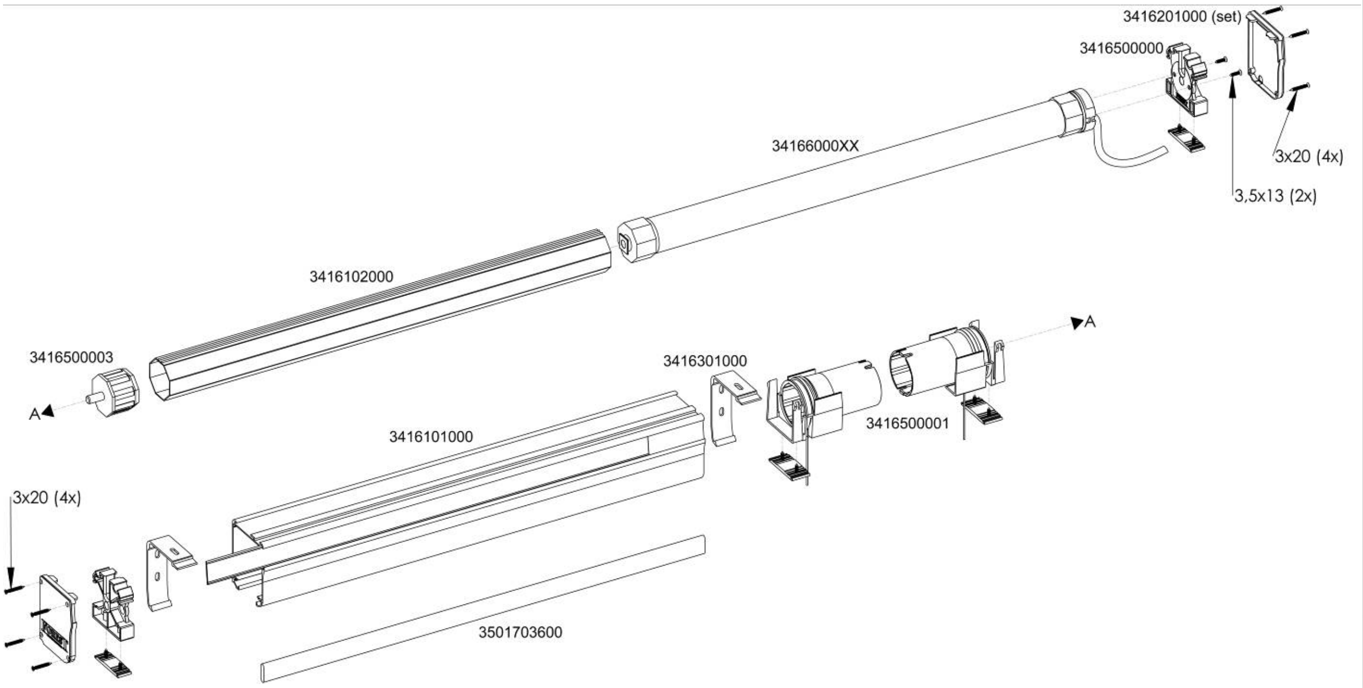
Keep in mind:

- the profile must be cut 1,5cm shorter than the total width of the system
- the octogonal tube must be cut 5,5cm shorter than the profile, or 7cm shorter than the total width of the system
- BCS profile lenght is max. 5,80 mtr.
- BCS curtain height is max. 5,50 mtr.
- max. weight for one cord roll is 4kg
- total weight of the curtain is 2,5 – 3 kg for each Nm torque of the tubular motor
- use this table to determine the amount of cord rolls:

Tracklength (in cm):	No of cord rolls:		Tracklength (in cm):	No of cord rolls:
0 – 134	3		365-399	8
135-189	4		400-444	9
190-223	5		445-489	10
240-314	6		490-534	11
315-364	7		535-580	12

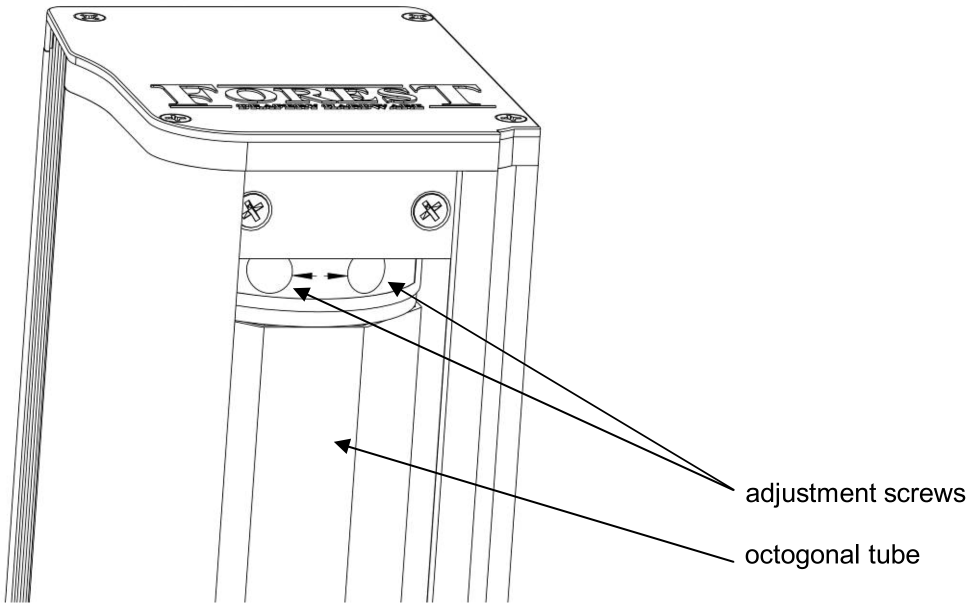
Assembly of the Blind Contract System

Attach the octogonal adaptors to the tubular motor. Slide the motor into the octogonal tube and operate the motor in one direction until an end position is reached. If metal parts are fixed on the motor head, unscrew and remove these.
Assemble the system according to the exploded view below. The adjustment screws on the motor must be accessible from the lower side. Unwind the cord rolls and make sure all cord rolls are alligned in the same position on the octogonal tube


3416201000 (set)
3416500000
34166000XX
3x20 (4x)
3,5x13 (2x)
3416102000
3416500003
A
3416301000
A
3416500001
3416101000
3x20 (4x)
3501703600

Installing the Blind Contract System

Use one wall/ceiling bracket for every 50-60cm track length.
Mount the system on wall/ceiling and attach the fabric. Attach the snap cord fixers on the cords at the bottom of the blind. Do not cut off the exces cord yet.



Setting the motor end positions

- when the track is pre-assembled the cord is fully unwound (closed blind position). The lower end position is already set.
- Adjusting the upper and lower end positions is done by turning the 2 adjustment screws. Use a 4mm hex key, never a battery screwdriver. Which screw to adjust up and which screw to adjust down depends on the direction of rotation ot the octogonal tube.
- One rotation of an adjustment screw is ± 3cm blind height.
- make sure that the cords never hang loose when the motor is running.

Control the blind upwards. Look at the octogonal tube and remember the direction of rotation. Make a mark (with a permanent marker) next to the arrow with this direction of rotation. The screw next to this arrow is the adjustment screw for the upper position.

Adjust the upper endposition:
Control the blind upwards. To adjust the upper end position higher, turn the marked adjustment screw to direction +, until the desired height is reached.

If the upper end position is too high, turn the marked adjustment screw to direction -.
Control the blind downwards and upwards again. Repeat until desired height is accomplished.

Adjusting the lower endposition:
Control the blind downwards. To adjust the lower end position lower, turn the unmarked adjustment screw to direction +, until the desired height is reached.

If the lower end position is too low, turn the unmarked adjustment screw to direction -. Control the blind upwards and downwards again. Repeat until desired height is reached.

The motor should never make noise when it has stopped in the upper position. This happens when the upper endposition is adjusted too high. The motor or cord could breakin this case.

BCS TUBULAR MOTOR - BUILD-IN RECEIVER AND ELECTRONIC LIMIT SETTING

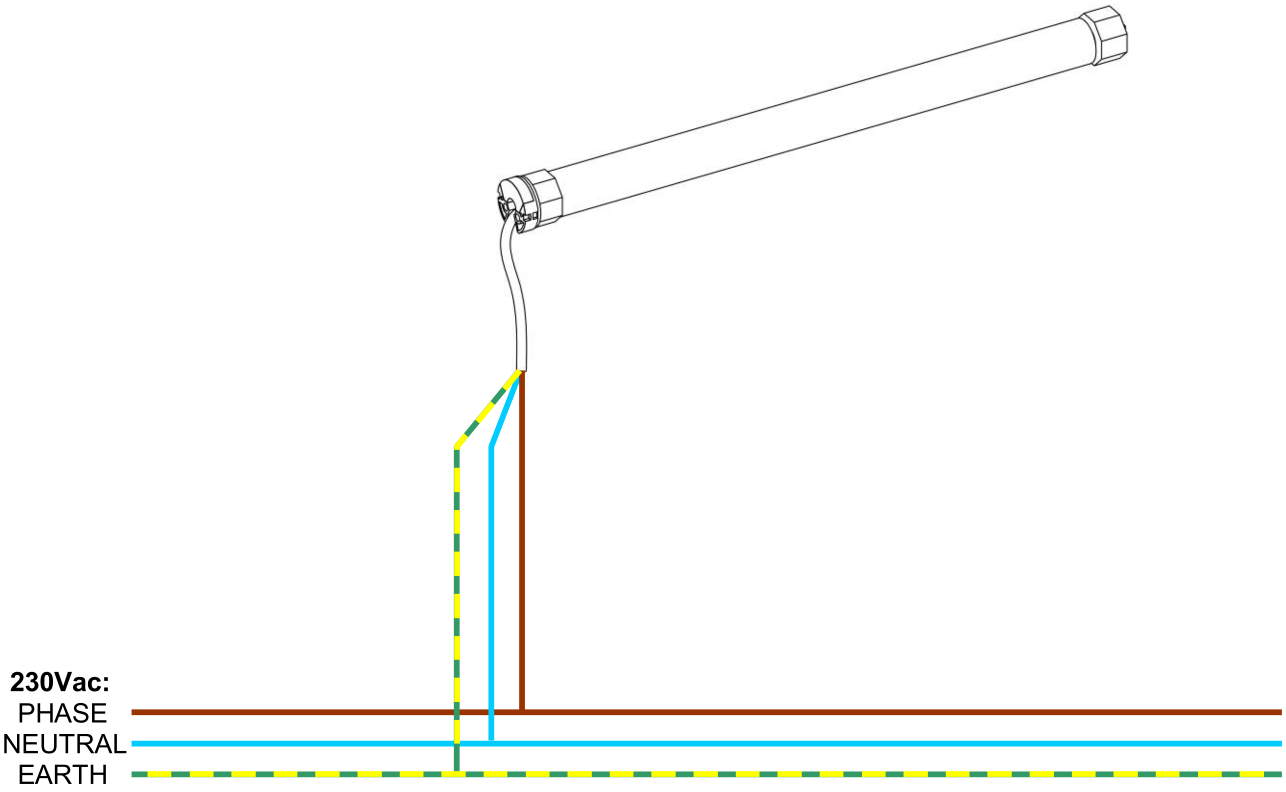
TECHNICAL SPECIFICATION:

- 3416600099 – 6Nm, 33rpm, build-in receiver, electronic limit setting (110V)
- 3416600110 – 3Nm, 28rpm, build-in receiver, mechanical limit setting (230V)
- 3416600112 – 6Nm, 28rpm, build-in receiver, electronic limit setting (230V)
- 3416600116 – 13Nm, 14rpm, build-in receiver, electronic limit setting (230V)
- 3416600117 – 6Nm, 20rpm, build-in receiver, electronic limit setting, Quiet (230V)
- max. running time 4 min.
- protection degree IP44 (230V), class B (110V)
- has to be used with Multi remote and/or Multi wall switch RF

IMPORTANT

⚠ 230V: use only wires BROWN (phase), BLUE (neutral) and GREEN/YELLOW (earth).
The additional two wires are for connecting the optional obstruction sensor.
Make sure these two wires do NOT make contact with power or connect together.

110V: use only wires BLACK (phase), WHITE (neutral) and GREEN (earth).



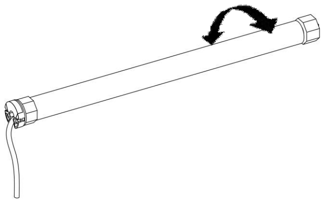
BCS TUBULAR MOTOR - BUILD-IN MULTI RECEIVER AND ELECTRONIC LIMIT SETTING

PROGRAMMING REMOTE / WALL SWITCH TO TUBULAR MOTOR

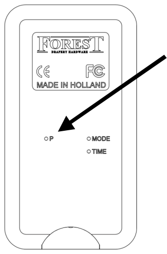
(button presses within 6 seconds)

first select the desired channel

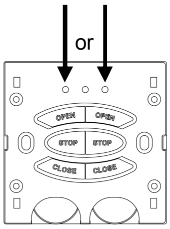
press button on motor, motor will turn short to acknowledge



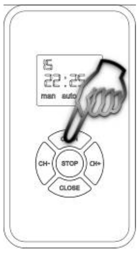
press button two times



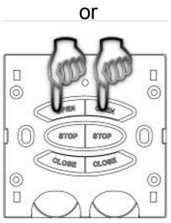
or


or
OPEN
STOP
CLOSE

press OPEN-button one time



or


or
STOP
CLOSE

motor will turn to acknowledge

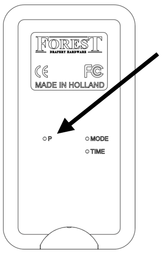
To change the direction of rotation, keep green button on motor pressed for 7 sec, until motor turns to acknowledge.

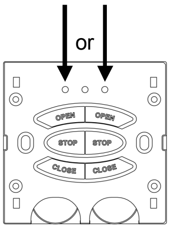
ADD MORE REMOTES / WALL SWITCHES / CHANNELS TO TUBULAR MOTOR

(button presses within 6 seconds)

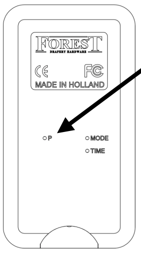
first select the desired channel

1st remote: press button two times

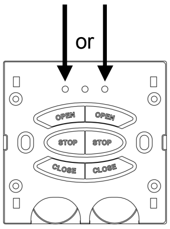



or
OPEN
STOP
CLOSE

2nd remote: press button one time



or


or
OPEN
STOP
CLOSE

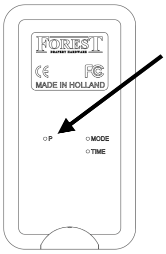
motor will turn to acknowledge

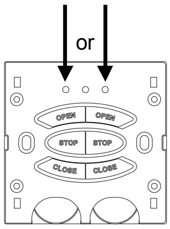
to add another channel on the same remote: select the programmed channel, press button on back of remote 2 times, select desired channel and press button on the back. Motor will turn to acknowledge.

CANCEL ALL REMOTES OR WALL SWITCHES

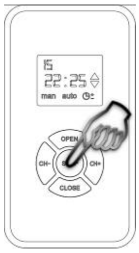
(button presses within 6 seconds)

press button one time

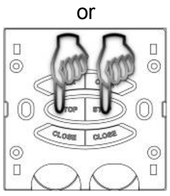



or
OPEN
STOP
CLOSE

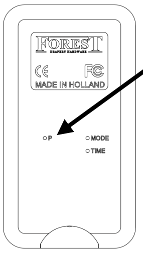
press STOP button one time



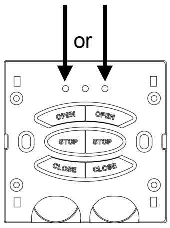
or



press button one time



or

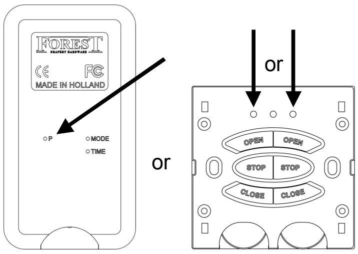

or
OPEN
STOP
CLOSE

motor will turn to acknowledge

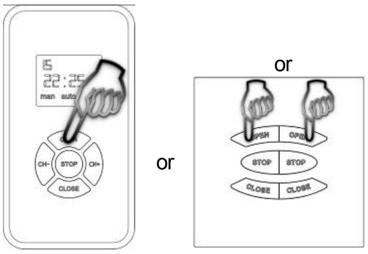
ADJUSTING UPPER AND LOWER END LIMITS:

IMPORTANT: when more motors are programmed to one channel, end limits of all motors will be adjusted

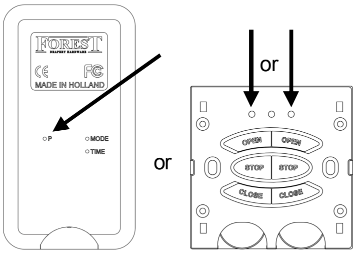
press button one time


or
or
FOREST
MADE IN HOLLAND
P
MODE
TIME
OPEN
STOP
CLOSE

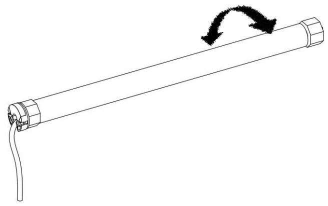
press OPEN button one time


or
or
man auto
CH-
STOP
CH+
CLOSE
OPEN
STOP
CLOSE

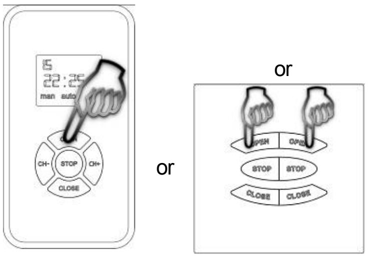
press button one time


or
or
FOREST
MADE IN HOLLAND
P
MODE
TIME
OPEN
STOP
CLOSE

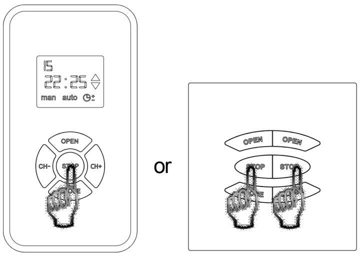
motor will turn
to acknowledge



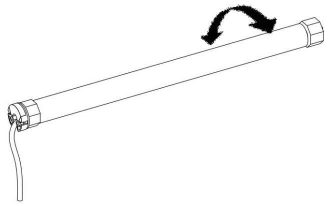
adjust UP limit


or
or
man auto
CH-
STOP
CH+
CLOSE
OPEN
STOP
CLOSE

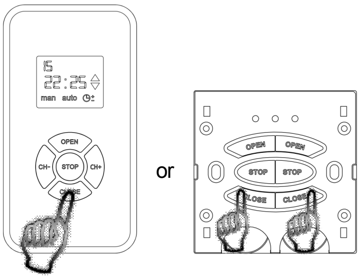
press STOP button when required
height is reached. Press STOP button
5 times slowly for 1 seconds to confirm


or
man auto
OPEN
CH-
STOP
CH+
OPEN
STOP

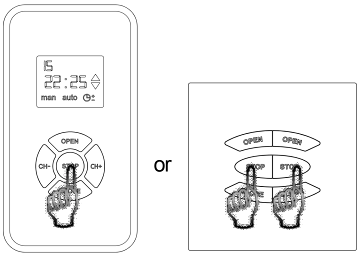
motor will turn
to acknowledge



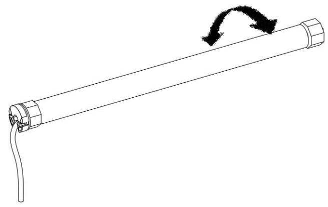
adjust DOWN limit


or
man auto
OPEN
CH-
STOP
CH+
CLOSE
OPEN
STOP
CLOSE

press STOP button when required
height is reached. Press STOP button
5 times slowly for 1 seconds to confirm


or
man auto
OPEN
CH-
STOP
CH+
OPEN
STOP

motor will turn to acknowledge,
limits has been set successfully.



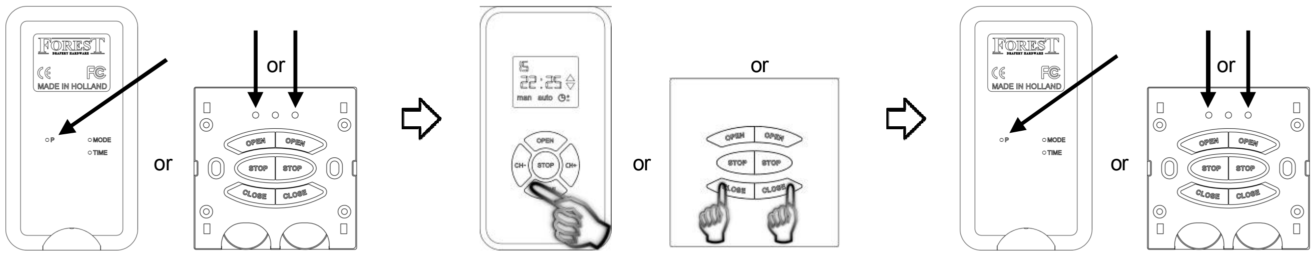
CANCELLATION OF UPPER AND LOWER END LIMITS:

⚠ IMPORTANT: When cancelling end limits, all motors programmed to that channel will be cancelled

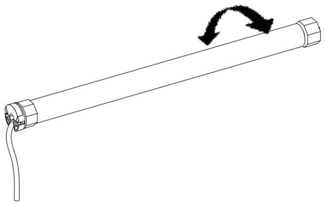
press button one time

press CLOSE button one time

press button one time


FOREST
MADE IN HOLLAND
P
MODE
TIME
or
or
OPEN
STOP
CLOSE
15
22:25
man
auto
CH-
CH+
or
or
or
or

motor will turn to acknowledge,
limits has been set successfully.



REVERSE DIRECTION SETTING:

When motor is not running, press button on motor for ~ 7 seconds, until motor turns to acknowledge.

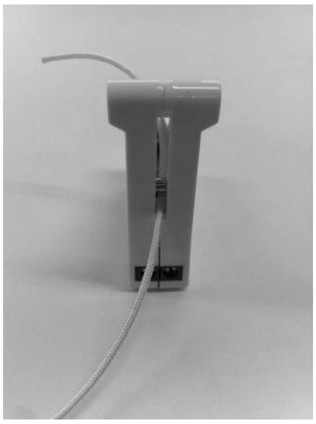
OBSTRUCTION SENSOR SET - 3416800000

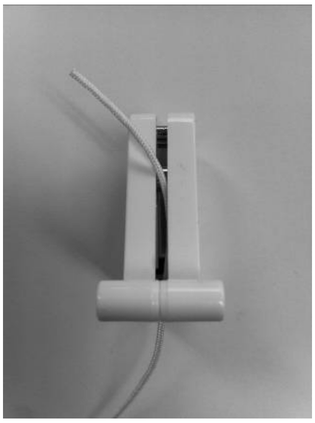
This product must be installed by a person with professional knowledge. The installer must comply with the current standards and legislation in the country in which the product is being installed. Only possible for 230Vac tubular motor.

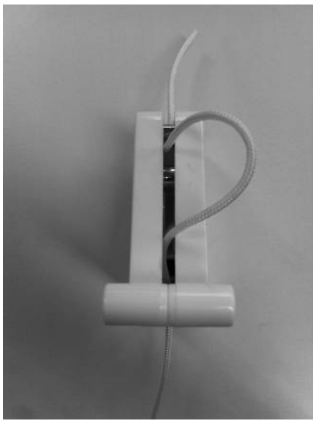
With this set a BCS motor will stop turning when something is blocking the roman blind. This prevents the cords from getting stuck when lowering the blind.
This set can only be used in combination with a Forest tubular motor with build-in receiver and mechanical or electronic limit setting. Use two sensors per system on the outside cord rolls. Systems wider than 3 meter (10 ft.) need a third sensor in the middle.

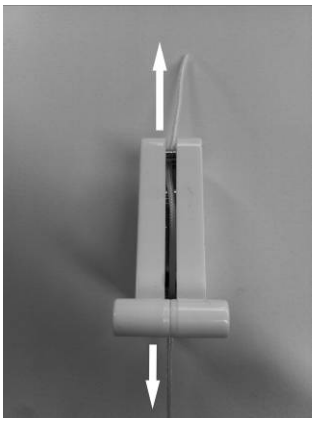
Assembly of the obstruction sensor set:

Push the cord through the sensor as shown in picture 1 to 4. When the cord is pulled (picture 4), then a ‘click’ can be heard.

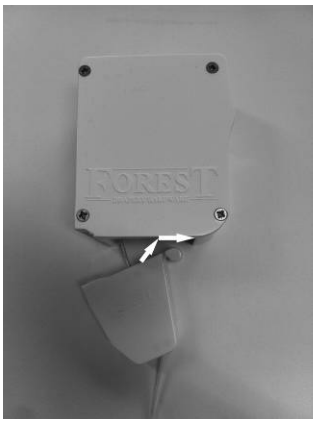

picture.1


picture.2

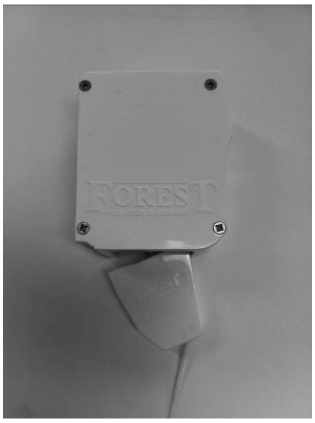

picture.3


picture.4

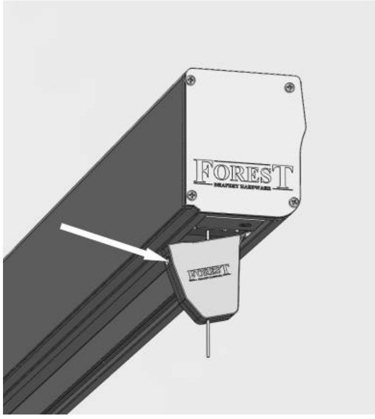
Push the obstruction sensor in the BCS track as shown in picture 5 and 6.



picture.5



picture.6



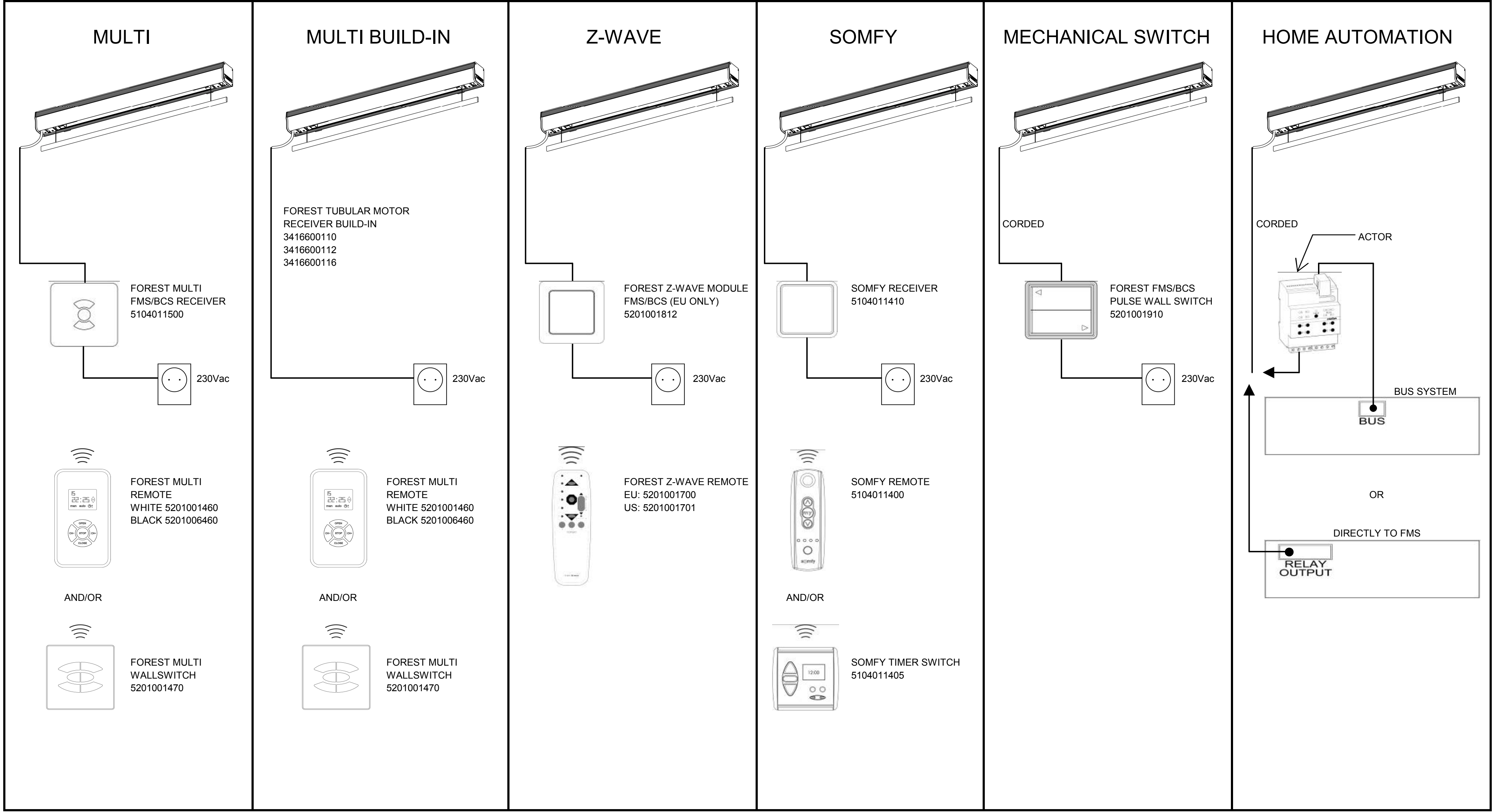
picture.7

Connecting: included in the set is a cable for connecting the sensors to the motor. Use only two wires of the cable (e.g. red and green). Connect these wires to the sensor as shown in picture 7.
The sensors need to be connected in parallel to the black and white wire of the motor cable. Make sure that in no way the wires from the sensor, or the black and white wire make contact with the blue, brown or yellow/green wires.

FOREST
DRAPERY HARDWARE

WAYS TO OPERATE BCS

RF WIRELESS | **WIRED**



MULTI

FOREST MULTI
FMS/BCS RECEIVER
5104011500

230Vac

FOREST MULTI
REMOTE
WHITE 5201001460
BLACK 5201006460

AND/OR

FOREST MULTI
WALLSWITCH
5201001470

MULTI BUILD-IN

FOREST TUBULAR MOTOR
RECEIVER BUILD-IN
3416600110
3416600112
3416600116

230Vac

FOREST MULTI
REMOTE
WHITE 5201001460
BLACK 5201006460

AND/OR

FOREST MULTI
WALLSWITCH
5201001470

Z-WAVE

FOREST Z-WAVE MODULE
FMS/BCS (EU ONLY)
5201001812

230Vac

FOREST Z-WAVE REMOTE
EU: 5201001700
US: 5201001701

SOMFY

SOMFY RECEIVER
5104011410

230Vac

SOMFY REMOTE
5104011400

AND/OR

SOMFY TIMER SWITCH
5104011405

MECHANICAL SWITCH

CORDED

FOREST FMS/BCS
PULSE WALL SWITCH
5201001910

230Vac

HOME AUTOMATION

CORDED

ACTOR

BUS SYSTEM

OR

DIRECTLY TO FMS

WARRANTY & RETURN POLICY

Forest Shuttle® Motors, BCS® and FMS® Devices.

1. The Forest Shuttle Motor and Control Devices are warranted against defects of components and workmanship for ten (10) years from the date of purchase from the Forest Group Nederland B.V. factory. The BCS and FMS Devices are warranted against defects of components and workmanship for five (5) years from the date of purchase from the Forest Group Nederland B.V. factory. The warranty is applied when only parts of Forest Group B.V. are used in the system.

2. Should any failure to conform with this warranty appear during the specified period under normal and proper use, and provided that the motor and devices have been properly stored, installed and maintained with due regard to any directives, instructions and operating procedures provided by the manufacturer, Forest Group Nederland B.V. shall, upon presentation of proof of purchase, correct such nonconformity either by repair or by replacement of the nonconforming part, Ex Works, at the option of Forest Group Nederland B.V. Return of motors or devices pursuant to this paragraph shall be at purchaser's risk and expense.

3. Forest Group Nederland B.V. warrants motors and devices, repaired or replaced pursuant to the foregoing warranties, under normal and proper use, storage, installation and maintenance, against defects in materials for a period of thirty (30) days from date of start-up of such repaired or replaced motors or devices or the expiration of the original warranty, whichever is longer.

The foregoing warranties do not cover defects resulting from misuse or failure to follow instructions. They also do not cover labour on location, service calls, reinstallation or expenses involved in shipping, packing or returning goods.

In no event shall Forest Group Nederland B.V. be liable for any indirect, incidental, consequential or other damages in connection with this product. This disclaimer applies both during and after the period of this warranty.

In no event shall Forest Group Nederland B.V. be responsible for providing working access to the defect, including disassembly or reassembly of motors, hardware or devices.

Return Policy

Forest Group Nederland B.V. products are customized, and as a rule, they cannot be returned. Any goods to be returned to the Forest Group Nederland B.V. factory for repair, credit or otherwise must be clearly marked with the RGA (Return Goods Authorization) number issued by the Forest Group Nederland B.V. customer service department. No return goods will be accepted unless clearly marked with an RGA number. Any return shipment to Forest Group Nederland B.V. must be freight prepaid. All shipments from the Forest Group Nederland B.V. factory will be made EXW, freight collect, best way, unless arranged otherwise. Final acceptance of returned goods is subject to factory inspection. Restocking charges will apply.